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Address.

THE STATUS OF THE SECTION ON OPHTHALMOLOGY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON OPHTHALMOLOGY, AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, AT NEW ORLEANS, MAY 5-8, 1903.

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NEW YORK.

The By-laws of the American Medical Association provide that the chairman of each section shall present "an address on recent advances in the branches belonging to his Section, including such suggestions in regard to improvements or methods of work as he may deem important." This defines the character and limits the scope of his address and is, no doubt, a wise provision. Certain departures from the letter of the law are, I infer, permissible and, in pursuance of this belief, I shall digress sufficiently to welcome you all most heartily to this session of the Section, also to offer you my sincere thanks for the splendid manner in which you have supported the officers of the Section in their endeavor to present a program full to overflowing of valuable papers.

Some years ago Dr. Casey A. Wood, acting under Section 3 of the Constitution, which empowers officers of Sections to invite distinguished physicians of foreign countries to become members of the Association for the year and to particpiate in the affairs of the Section, endeavored to have a distinguished ophthalmologist of Paris attend the session of the Section. An invitation was extended and accepted, but at the last moment word was received that it was impossible for the gentleman to be with us. Last year our then chairman, Dr. Frank Allport, gave us the privilege and pleasure of meeting Professor Haab of Zurich, Switzerland, and of welcoming him to our country and to full participation in the affairs of our Section.

The precedent established by my able predecessors is one that, in my opinion, should be continued, not only because it serves to bring us in contact with men who are leaders in our branch of medicine, but because of the incentive to better work that such contact engenders. I have endeavored to emulate the example set me, with results similar to those of Dr. Wood.

The Section on Ophthalmology of the American Medical Association should be, as I believe it now is, the representative body of ophthalmologists in the United States. Its membership area is wider than that of any other society. As a part of a great Association of representative medical men, it has collateral support, and it is founded on a Constitution and governed by By-laws sufficiently broad and liberal to permit of indefinite expansion. The method of officering the Section provides against the danger of the domination of cliques and of the continuation of officers through courtesy or otherwise that might endanger its activity. The possibilities of the Section are great, and we should all endeavor to cause these possibilities to be realized by lending our influence to the production of work of the highest order and by making the meeting of the Section of the greatest possible interest.

The inducements to become identified with the Section are more than those afforded by any other association of ophthalmologists in this country. Some of them may be enumerated. First, contact with representative colleagues from all parts of the United States. Second, the assurance of large attendance. Third, the publication of accepted papers and the discussions of these papers in a journal having a larger circulation than any other medical journal in the United States, as well as the publication of papers and discussions in a bound volume of transactions at a nominal cost.

In regard to the volume of transactions, the chairman would suggest that an opportunity be afforded to every member of the Section, whether he be present or not, to obtain a copy. This could be satisfactorily arranged by the Executive Committee.

It is scarcely necessary that your chairman should mention to any extent the recent advances in ophthalmology. These will be presented in better form and more *in extenso* by the members of the Section in the session on which we are now entering. Some lines of research which promise much to careful workers may be mentioned: The effect of the *x*-rays and of the Finsen rays on neoplasms, detached retina, deep inflammatory processes and suppurative processes deserves more study. The study of the bacteriology of the eye is not yet exhausted; there are still some acute processes, apparently of bacterial origin, the causative agent of which is not known, among which may be mentioned Parinaud's conjunctivitis, trachoma and some of the suppurative diseases of the cornea. The question of the value of subconjunctival, intra-orbital and intrabulbar injections is yet in a chaotic state. This is a question which possesses potentials for much good to our patients. An exhaustive paper on orbital neoplasms, embracing the results of a careful study of all varieties by modern methods, would be heartily welcomed by all ophthalmologists.

Original Articles.

THE VALUE OF ENTEROSTOMY IN SELECTED CASES OF PERITONITIS.*

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Among the many serious aspects in which that protean disease, appendicitis, is presented to the surgeon, there is none more alarming than the types in which diffuse peritonitis is attended with intestinal paralysis and distention of the abdomen. Here we have in addition to the already severe septicemia due to absorption from the peritoneum, a toxemia from absorption of the poisonous products of stagnating feces in the intestine, and the great depression produced by gaseous distention of the bowel. The mechanical interference with the descent of the diaphragm renders respiration feeble and shallow, interferes with the aëration of the blood, and adds the grave complication of asphyxia to tax the failing strength of a patient already almost exhausted. It is hard to conceive of a more certainly fatal form of assault on the organism.

We all, as surgeons, are familiar with the insidious and dangerous character of those cases of appendicitis which are so often sent to our hospitals with a diagnosis of "intestinal obstruction"—cases in which with a normal or slightly elevated temperature and local signs perhaps indefinite, the great distention of the abdomen, the bright eyes, blue lips, and dry tongue tell the story of a diffuse peritonitis with intestinal paralysis, and warn us of the gravity of the case with which we have to deal.

It is in cases of this sort that we find the greatest difficulties in the operation, and must look most sharply for complications in the after-care, and it is to the treatment of cases of this type that I would briefly invite your attention. So dangerous seems to me this type of the disease that I can truly say that I would rather meet a case of diffuse peritonitis involving the whole abdominal cavity without paralytic distention of the bowel, than a more localized and dry form of the disease in which this complication is present.

A brief consideration of the nature and causation of this distention which we call paralytic is necessary to our further argument. This distention is a complex phenomenon in which several causes may reasonably play a part. In its production may be concerned: First, obstruction of the bowel by angulation, due to fresh fibrinous adhesions, and the prevention of peristalsis by these same adhesions when they involve an extended area of the bowel. Adhesions of this type are found early in the dry type of diffuse peritonitis.

A second causative factor may be the laming of the smooth muscular fibers by the infiltration of the intestinal wall with inflammatory products. In the early stages of appendicitis it is well recognized that the infiltration of the intestine in the region of the ileocecal valve may temporarily paralyze a local section of the bowel, and result in vomiting and distention which passes off as the disease subsides or is operated on.

A third causative factor may be the paresis of the musculo-nervous peristaltic apparatus by the effect of toxins absorbed by the central nervous system. The paresis resulting from this last cause may, for the purposes of our argument, be disregarded, as it will occur only in the latest stages of septicemia, and after our patient is reduced to the deepest stages of exhaustion by the absorption of toxic products.

In the cases in which distention comes on early in an attack before the patient is profoundly septic or soon after an operation, it is undoubtedly due to one of the first two causes, namely, adhesions from fresh fibrinous exudate, or paralysis of the musculo-nervous apparatus of peristalsis by the presence of exudate in the intestinal wall. Of these two causes, the first is probably the more important.

When we consider the complexity in the shape and position of the intestine, and the importance of free mobility both to the production of peristalsis and the prevention of obstruction, it seems remarkable that paresis and obstruction are not universal accompaniments of peritonitis. It is obvious that a central peritonitis, such as arises when the appendix or other infecting organ is centrally situated, among the freely movable coils of small intestine will be more apt to cause intestinal paresis than a peripheral process situated, for instance, on the outer side of the fixed ascending colon, and between the latter and the abdominal wall.

The greater comparative fixation and the greater caliber of the large intestine render it less liable to kinking from fresh fibrinous adhesions than the small intestine.

Distention due to the first cause, angulation or compression by adhesions is more properly termed obstruction than paresis. Kinking many follow a local process, an adhesion at a single point, and result in distention of the entire intestine above that point. Multiple and extensive adhesions to other viscera and the abdominal wall may result in multiple angulations, and at the same time hamper the intestinal muscles, and these two processes may be associated in a greater or less degree with actual laming of the muscle itself by infiltration about and between the fibers. The exact part played by either process does not interest us, as the result is the same and the treatment indicated is the same, namely, to furnish a safe and easy exit to the contents of the over-distended bowel in order to allow it to collapse and recover its muscular tone.

In the milder cases it may be sufficient to stimulate peristalsis by irritating enemata of turpentine, glycerin and Epsom salts, and remove by the use of the rectal tube the obstruction from the contraction of the sphincter. These methods should be and are, of course, always tried before resorting to enterostomy. Enterostomy is a serious procedure; it subjects the patient certainly to the annoyance and discomfort of a fecal fistula, and generally to the danger of a secondary operation for the closure of the opening. The operation is, however, a simple one; it may be performed under local anesthesia, and the secondary operation is generally also simple and safe. It is proposed only in cases practically moribund from septicemia, asphyxia, from pressure upon the diaphragm, and often continually vomiting feces. The rescue of a few of these patients who, if let alone, are face to face with certain death, is certainly an adequate recompense for the slight inconvenience of the operation and the fecal fistula. In these cases, then, after other means have failed, the operation, it seems to the writer, is distinctly indicated, and in his experience and that of his colleagues it has been the means of saving valuable lives.

Local anesthesia avoids the special danger of a general anesthetic in these cases, namely, depression and inhalation of vomitus.

A word as to the time for the operation. Certain surgeons, among them Dr. Mixter of Boston, advocate in

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. A. J. Ochsner, J. E. Moore and De Forest Willard.

cases of diffuse peritonitis with distention, the establishment of an outlet for gas and feces at the primary operation by the simple procedure of incising the cecum and tying in a glass tube. This tube may be removed in four or five days after distention has been relieved and adhesions formed about the wound, and it is said that the fecal fistula rarely remains for so long a time as to require an operation.

The writer, however, has felt that a fecal fistula should not be established except as a last resort. He has had such good results from the free incision of the intestine and suture of the wound after emptying the bowel, and perhaps injecting a saturated solution of Epsom salts at the time, that he has deemed it wiser to limit the primary interference to the above-mentioned procedure, associated, of course, with drainage of the abdomen and the usual procedures for the treatment of the peritonitis. Enterostomy should, in his opinion, be reserved for those cases in which, after the primary operation, enemata have failed to move the bowels, and the patient's life is endangered by distention. Thus the patient is not subjected to the annoyance of a fecal fistula till other means have been tried, and both patient and operator are satisfied of its necessity.

This reasoning does not apply, however, to cases in which the operation is done on patients living at a distance who can not be under the surgeon's immediate personal care. Under these circumstances the writer believes it wiser to open the bowel at the primary operation rather than run the risk of the patient's dying from paralytic distention before he can reach him for the secondary procedure.

In a case of general peritonitis with distention operated on this winter in the country, the writer did not open the bowel at the primary operation and returned to the city. The attending physician was kept away during the night following the operation by an obstetric case, and could not open the bowel, and the patient died of extreme paralytic distention early in the morning of the day following the operation.

Under such circumstances, immediate ileostomy or cecostomy would be distinctly advisable.

Instead of opening the cecum the writer has opened the small intestine, for the following reasons:

1. The fibrinous adhesions which cause the obstruction are probably located in the region of the ileocecal valve, and affect the small intestine above that valve. It is manifestly important to open the bowel above the point of obstruction, therefore a coil of small intestine which by distention shows that it is above the main point of obstruction is chosen.

2. The difficulty of the operation for resection and closure of a fecal fistula in the small intestine has, in the writer's hands, been considerably less than a similar operation on the cecum, because the small intestine can be brought outside the abdomen and operated on extraperitoneally, which is not always the case with the cecum. Lennander, who advocates opening the cecum at the primary operation or arranging gauze packing so as to have a surface of it exposed in the wound for subsequent incision, regards the opening of the small intestine as hazardous, owing to the uncertainty as to the distance of the point opened from the cecum. He has found in his experience that the coils of small intestine below the fistula become united by adhesions into a complex and undecipherable mass, and that if the patients lived, an ileocolostomy was necessary in order to cure the fecal fistula. The writer has not had this experience, although, as will be seen in the report of Case 3, an intestinal resection was necessary for chronic obstruction following enterostomy and closure of the fistula. This operation, however, was necessitated by adhesions above the ileocecal valve, so that it is difficult to see how opening the cecum would have relieved the obstruction in the first place, or how the fact that the ileum was opened had anything to do with their causation.

The advantages, then, of this method of ileostomy over cecostomy are that the intestine is certainly opened above the obstruction in case it is a kink in the cecal region, and the comparative simplicity of the operation for closure of the fistula. The bowel below the opening in the writer's cases never became so empty as to be adherent in a tangled mass, as shown by the fact that contents constantly passed through them, as shown by the abundant bowel movements. It is certainly a fair question whether the same result would not have happened had the cecum been opened instead of the ileum.

For the cecal operation the advantage is claimed that enemata, cathartic and nutritive, may be administered at once through the tube. The same treatment may be administered through a fistula into the small intestine. The primary point, it seems to the writer, is to get the intestine opened above the kinked or paralyzed portion, and enable the over-stretched muscles to get rid of their stagnating contents and recover their tone.

A word as to the technic: Local anesthesis with cocain solution (0.1 per cent.) should always be employed, owing to the danger of inhalation of fecal vomitus. The patient need not necessarily be removed from bed, but it is better to place an operating table in the room beside the bed, and gently lift the patient onto it. After cocainizing the skin and subcutaneous tissue, an incision one inch long is made in the median line below the umbilicus. The aponeurosis is then quickly infiltrated and the abdomen opened. The nearest distended coil of small intestine is sutured to the aponeurosis around the opening by a continuous suture of Pagenstecher thread, opened, and a large catheter of glass tube inserted a short distance into the afferent coil so as to prevent valve formation at the opening. An escape of a moderate amount of gas and perhaps feces takes place at once, and the patient generally expresses relief even for the slight diminution of distention which is at once evident. The operator need not be disappointed that the immediate amount of feces passed is small. A large gauze dressing is applied over the wound, which is kept separate from the other laparotomy dressing by a partition of rubber tissue stuck down to the abdominal wall with a strip of adhesive plaster.

In the course of a few hours, as the over-stretched intestinal muscles regain their tone, there follows a copious discharge from the opening, and generally the relief of tension allows the bowel below the opening to begin to act, so that enemata are successful in obtaining movements from the rectum. The pulse begins to fall within six to eight hours in successful cases.

The operation for closure of the fecal fistula may be done at any time after the patient has recovered his strength so as to be in good condition for it. The technic is simple, and, as employed by the writer and his colleagues, is as follows: The opening is first closed by coarse silk sutures passed through its border in the abdominal wall. Then the opening is circumscribed by an incision through the skin and muscle close to the border, the abdomen opened, and the adhesions freed around the

loop of the bowel. This is now drawn out of the abdomen and the margin of the opening with adherent skin, etc., excised till healthy bowel is reached. Then the opening in the bowel is sutured in a direction transverse to its axis (so as not to narrow the lumen) with through-and-through sutures of catgut. This line of suture is infolded by a continuous Cushing right-angled suture of Pagenstecher linen thread. The coil after being thoroughly cleansed with salt solution is then dropped back into the abdomen, and the wound in the abdominal wall closed with through-and-through sutures of silkworm gut around a small gauze drain passed down to the suture line.

In case the obstruction instead of being only temporary has remained permanent, owing to persistence of the adhesions, further operative procedures, even perhaps resection of the intestine, may be necessary for its relief, as in Case 3.

A comparison of the value of the writer's method with primary cecostomy is difficult owing to the rarity of reported cases. He awaits the reports of cases in which that procedure has been adopted in order to estimate its immediate efficacy and favorable after-results, which, according to the verbal report of surgeons connected with the Massachusetts General Hospital, have followed that procedure.

Statistical comparison with secondary cecostomy is also impossible on account of the rarity of reports of cases. In certain cases, cecostomy has resulted in saving the life of a desperately sick patient,[1] and in these cases there can be no doubt that the distention was paralytic, or the obstruction, if present, concerned the sigmoid.

Cases 1 and 3 of this paper, however, may be pointed out as cases which would probably not have been helped by this method.

The writer has the privilege, through the courtesy of Dr. John C. Munro and Dr. George H. Monks, in whose service they occurred, of reporting three cases of enterostomy for intestinal paralysis following operations for appendicitis, and is able also to report one case in which the same operation was done for peritonitis following a stab wound in the intestine. Dr. John T. Bottomley has also, April 24, just performed the operation in a case seen in consultation by Dr. Munro and the writer, in a patient dying from distention forty-eight hours after an operation for acute appendicitis. The patient was temporarily relieved, but died on the sixth day after the operation of septicemia. The report of the case is kindly furnished by Dr. Bottomley.

In addition to these cases reported in full, the writer has done the operation in one other case of peritonitis due to the perforation of the vaginal vault by a splinter of wood; in this case the relief of the distention was not sufficient to enable the patient to overcome the advanced septicemia from which she was suffering, and she died.

He has twice opened the presenting intestine adherent in the bottom of a wound of operation for general peritonitis following appendicitis without avail, the patients being already septicemic.

The operation has also been performed twice by colleagues at the writer's suggestion in cases of distention in advanced peritonitis, in both cases proving unavailing.

The writer does not advocate the procedure with any hope that it will prove uniformly successful, because many patients who may seem suitable for it will be found to be suffering from septicemia so severe that they can not recover strength after relief is afforded to the distended bowel. He does not advocate it either in all cases of general peritonitis which are progressing to a fatal termination after an unavailing laparotomy. But he does feel that there is a class of cases in which the obstruction or paralysis kills the patient rather than the septicemia, and that of these cases a certain number can be saved.

1. Madden: Lancet, London, 1902, 1533-34.

REPORTS OF CASES.

Case 1 may be summarized as follows: Operation on the fourth day of a subacute attack of appendicitis. Appendix adherent at tip to rectum in median line. Secondary enterostomy under ether for distention and intestinal paralysis 48 hours after the primary operation. Recovery. Operation for closure of fecal fistula after six weeks. Recovery. Good health two years after operation.

History.—C. P. B., 21 years old, single, a bank clerk, was admitted to the City Hospital as a private patient of Dr. J. C. Munro March 20, 1901. The patient had had a similar attack two weeks ago. Was seized the day before entrance with griping pains in the abdomen, which gradually grew worse. Vomited twice last night. Pain is not continuous, but at times is very severe. Feeling as if of pressing down on rectum. Abdomen distended, everywhere tympanitic. No tenderness or spasm. Temperature 98. Pulse 80.

Operation.—March 23. Ether. Median incision. Appendix three inches long, inside and behind cecum, base adherent to iliac vessels, coiled spirally on itself and with tip bound in adhesions deep in Douglas' pouch Ligated close to base with catgut. Stump cauterized with carbolic acid. Adhesions in pelvis broken up to free adherent loops, and cavity drained with iodoform gauze and glass tube. Appendix showed gangrenous inner coat, nearly perforated one-half inch from tip at site of old stricture.

March 25.—No movement of bowels since operation. Glass tube removed yesterday. Slight discharge. Wicks removed to-day. Cavity well walled off. Abdomen distended and tympanitic. Pulse 140. Ether. Incision in left iliac region. A small quantity of viscid fluid. No adhesions. Marked distention of bowels. A loop of gut brought to wound and roughly sutured to the transversalis fascia, and opened, but only a small amount of gas or fecal fluid escaped on account of the distention. Another loop adjacent was sutured and opened in same way, but evacuations of gas were unsatisfactory. Both loops were apparently small gut, but later it was shown that one was probably sigmoid. The original wound was explored and found clean and walled off. On breaking up adhesions and freeing a loop probably of small gut that was adherent deep in the pelvis and at a sharp angle, there was an immediate gurgle as of pent-up gas. The original wound was drained with iodoform gauze around a glass tube and separate dressings applied to each wound. Patient in very poor condition, almost constant regurgitation, poor rapid pulse, cyanosis, etc.

March 26.—Pulse 120. At 10 p. m. basin full of feces drawn by a catheter through artificial anus.

March 27.—Pulse still lower. Bowels kept flat by passing catheter into artificial anus. Feeding by mouth resumed, as nutrients came out through artificial anus. Progress good. Profuse discharge through artificial anus.

On April 25, four weeks later, the writer closed the artificial anus as follows: Incision was made into the abdomen just clear of the adherent loops which were dissected free from the abdominal wall and separated from each other. The granulating edges of the bowel were excised, the openings in each loop of bowel closed in a direction transverse to the lumen of the gut by three rows of Cushing continuous fine silk sutures, and returned to the abdominal cavity after thorough washing. No shock from operation. Good ether recovery.

The patient made an excellent recovery from this operation, leaving the hospital, May 18, and is now, two and one-half years later, in excellent health.

CASE 2.—Summary: Operation for acute appendicitis 24 hours after beginning of attack. Secondary enterostomy for

intestinal paralysis 48 hours later under local anesthesia. Recovery. Closure of enterostomy four weeks later. Recovery. Good health one and one-half years later.

History.—W. B., 23 years old, salesman, was admitted to Dr. Munro's service at the Boston City Hospital on Nov. 21, 1901, 24 hours after the beginning of an attack of acute appendicitis. The abdomen was moderately distended and generally tender, the tenderness and rigidity being most marked in the region of the appendix. Temperature 100.2. Pulse 108.

Operation.—Dr. Munro operated on day of entrance by a muscle-splitting incision in the right iliac region. Abdomen full of serum and sero-purulent fluid, the purulent portion coming from the pelvis. A long, acutely inflamed appendix gangrenous in inner portion and hanging over brim of pelvis, was ligated with catgut and removed. As the general cavity was full of infected serum it was irrigated out with many quarts of salt solution and drained with a glass tube and iodoform gauze.

The following day he passed a little gas, but the pulse remained at 120 and the abdomen began to distend. The drainage wicks were started. The pulse fell to 90. The next day in the morning the bowels moved, but without relief of the distention, which increased during the day, and the patient was given several high enemata of turpentine without result. The pulse rose to 142 and was of poor quality. The patient was nauseated and weak.

The writer, in Dr. Munro's absence, saw him at 9 p. m., and in view of the increasing distention and rising pulse decided to perform enterostomy. Owing to the patient's poor condition and the danger of fecal vomiting under a general anesthetic, local anesthesia with 0.2 per cent. cocain solution was employed. An incision 1¼ inches long was made by the writer in the median line of the abdomen below the umbilicus, and the small intestine beneath was found injected and distended. A loop was sutured to the transversalis fascia by a continuous suture of Pagenstecher thread and opened, allowing escape of considerable gas and resulting in marked decrease of the distention. No shock attended the operation. Separate dressings were applied to the wound.

The following day the pulse fell to 112 and the distention was reduced by the passage of considerable gas through the artificial anus. Feces were soon passed by the rectum, but there was still abundant discharge from the wound until December 18, when Dr. Munro operated for closure of the fistula. The opening being closed by a temporary suture of silk, the incision was carried around the opening on each side through healthy tissue. There were no adhesions of the bowel except around the immediate edge, when it was sutured to the fascia. The loop of gut was brought out and the fistula excised. The opening was then closed by a row of Pagenstecher sutures, re-enforced by a Cushing right-angled continuous suture of pure silk. The wound was closed in layers with catgut and chromic gut.

Convalescence was normal, except for several attacks of vomiting and abdominal pain during the first week. The bowels moved freely and there was no distention. The patient left the hospital in good condition on Jan. 3, 1902. He is now, April 22, 1903, in excellent health .

CASE 3.—Summary. Operation for acute appendicitis with distention on fourth day of attack. Secondary enterostomy 48 hours later for intestinal paralysis and distention. Closure of enterostomy three weeks later. Five weeks later resection of intestine for partial obstruction. Recovery. In good health at time of report six months later.

History.—J. W., 11 years old, was admitted to the service of Dr. Monks at the Boston City Hospital on Oct. 28, 1902; four days before sudden pain in abdomen centering around umbilicus. Not radiating nor localized. Vomited frequently since onset of pain. No chills. Small movement resulting from enemata yesterday. General condition fair. Temperature normal. Pulse 100. Abdomen moderately and evenly distended. Coils visible. No peristalsis observed. Moderate general tenderness not at all localized. Moderate rigidity. Peritoneal facies.

Operation.—Ether. Median incision by the writer below umbilicus. Presenting intestine distended and injected. Free fluid, brownish and turbid. Incision enlarged to four inches, and intestine allowed to escape. Appendix found thickened, adherent, extending over pelvic brim into bottom of pelvis, where tip, covered with fibrin, lay in a small abscess cavity. Perforation ½ inch from end. Removal of appendix. At a point on the ileum near the ileocecal valve a large area of the surface of the bowel was covered with fibrin, evidently the seat of an adhesion. Below this point the bowel was not nearly so markedly distended as above. A coil of intestine above the adhesion was brought out over the side of the abdomen, opened and a large amount of feces allowed to escape. Saturated solution of Epsom salts was injected into the bowel and the opening sutured. Abdomen and pelvis flushed with salt solution. Bowel replaced and pelvis drained with glass tube and iodoform gauze wicks. Pulse 160 at close of operation.

October 29.—Occasional vomiting. Temperature normal. Pulse high and poor. Peritoneal facies, mildly delirious. No movement of the bowels or passage of gas.

October 30.—Abdomen considerably and evenly distended. Calomel, ¼ gr., every hour for eight hours without passage of gas. General condition worse.

Under cocain anesthesia an incision 1¼ inches long was made by the writer above the umbilicus. Presenting loop of small intestine, which was reddened and distended, sutured to transversalis fascia with silk. Small amount of gas and liquid feces escaped. Stimulated with strychnia, mildly delirious during operation. Not much relief from distention, probably due to atony.

October 31.—Good movement from turpentine enema. Now no distention.

November 4.—Profuse discharge from enterostomy wound and steady improvement.

November 7.—Attack of nausea and vomiting, with rise of pulse.

November 19.—One or two attacks of epigastric pain, nausea and vomiting.

November 21.—Ether and closure of enterostomy opening by the writer. Operation difficult on account of very extensive and firm adhesions to anterior abdominal wall. Separations of these adhesions difficult and attended by hemorrhage, which was controlled only by infolding the bleeding areas in silk. Opening in intestine carefully separated from abdominal wall and closed with Lembert sutures of pure silk. Further adhesions, very firm and fibrous, were noted to the lower part of incision, but it was not thought safe to separate them.

November 25.—Tendency to epigastric distention and occasional vomiting. Coils of intestine visible in epigastrium. Facies pinched. Occasional spasms of pain. Evidently partial obstruction. Operation discussed.

December 3.—Vomiting continual since last note. Distention continuing in spite of high turpentine enemata. Patient very restless. Facies pinched. Spasms of pain. Occasional passage of gas.

December 4.—Abdomen distended above umbilicus; coils visible.

Further Operation.—Dr. G. H. Monks. Ether. Incision in line of original incision below umbilicus. Abdomen opened freely. Great number of adhesions between intestines and peritoneum and between coils of intestine separated with difficulty, leaving large denuded areas of bowel which oozed freely and which could not be covered with peritoneum. At a number of places the adhesions had contracted the bowel, but not enough to reduce the lumen so as to endanger the fecal current. On following the jejunum toward the iliac fossa a marked contraction, cicatricial in character, was found, complicated by adherent omentum and bowel. The intestine beyond was collapsed; proximal intestine moderately distended. Adhesions were separated. The constricted portion of bowel was excised by removing a wedge-shaped segment 2 inches long on free border and one-half inch long on mesenteric border. Suture with continuous right-angled Cushing suture of fine silk. Patient's condition had become precarious, so that no effort could be made to stop oozing from denuded peritoneal

surfaces or to correct other partial constrictions which were found. The abdominal cavity was irrigated with salt solution and the wound hastily closed with interrupted silkworm gut. Small iodoform wick to seat of anastomosis. Rallied slowly from ether and operation.

December 5.—Slight delirium. Still distention. Pulse 140.

December 9.—Pulse 100. Vomiting ceased three days ago. General condition much improved. Distention disappeared. Abdomen soft. Good results from enemata.

December 14.—Rapidly improving. Soft solids by mouth.

December 28.—Gradually gaining. Diarrhea for past three or four days.

January 4.—Improving rapidly, though still much emaciated and pale. Diarrhea still. No distention.

January 9.—Still four or five liquid movements a day. Slowly gaining strength. Up and walking by aid of chair. He left the hospital on this date and reported on April 15, 1903, in excellent condition, having fully recovered his health and strength.

CASE 4.—Stab wound of small intestine. Suture of wound and return of intestine followed by properitoneal hernia. Operation for hernia followed by peritonitis with distention and adhesion of a coil of intestine to operation wound. Enterostomy on an apparently dying patient followed by rapid recovery. Closure of fecal fistula six weeks later.

History.—D. M., 62 years of age, was admitted to the Quincy Hospital Feb. 2, 1903, to the service of Dr. N. S. Hunting, through whose courtesy the writer is permitted to report this case. While at a dance at 1:30 a. m. the patient was stabbed in the abdomen. He walked to the office of a physician, who probed and sewed it with catgut. Pain followed and he was admitted to the hospital at 3:30 a. m.

Operation.—He presented a crescentic wound ⅝ in. long one-half inch above and to outside of right spine of pubes. Three stitches were removed. Abdominal wall thin and bowel presenting. Drs. Hunting and Ellsworth operated. Wound enlarged and opened parallel to rectus. It was found that the muscles had been cut upward and outward parallel to and just above inguinal canal. Some free bleeding from cut edge. Punctured wound of ileum ⅛ in. long, from which yellow serum-like fluid exuded on pressure. Closed with two rows of silk suture. Inguinal canal closed with kangaroo tendon after washing out with salt solution. The patient did well for three days, then, on February 11, there was abdominal pain and obstruction which high enemata failed to relieve. Temperature normal. Pulse 60.

Second Operation.—Ether. Dr. Hunting operated. Wound enlarged and opened parallel to rectus. Bowel at site of injury in good condition. Wound tight. On further examination it was found that the peritoneum was deflected from level of anterior superior spine and 19 inches of bowel lay outside the peritoneum, i. e., a peritoneal hernia. Opening in peritoneum was constricting the gut. It would admit tip of finger. Peritoneum opened freely and bowel inside was found injected with flakes of fibrin. The bowel was replaced and cavity washed with salt solution. Peritoneum and wound sutured around a drain of iodoform gauze.

During next three days cathartics and enemata failed to induce movement of bowels.

February 17.—Abdomen distended, skin red, pulled apart.

February 18.—Pain and tenderness in right abdomen.

February 19.—Distention. Wound looks sluggish. Slough and purulent expectoration.

February 21.—Condition same. Distention very marked in spite of repeated small movements from $MgSO_4$. Regurgitates dark green fluid.

February 22.—Uncomfortable. Pulse and temperature good.

February 23 the distention became extreme. The patient was continually vomiting fecal matter and the pulse rose to 140 and became very weak. The writer was called in consultation and found the patient in very poor condition. It was decided to perform enterostomy. With local anesthesia an incision one inch long was made in the median line below the umbilicus. On opening the abdomen it was found full of pus. It was thought desirable to supply drainage for this pus before opening the intestine, and the writer therefore decided to reopen the original wound and insert a glass drainage tube through its lower angle into the pelvis before performing the enterostomy. On dissecting into this wound the intestine was accidentally opened and at once there took place a very free passage of gas and feces, and the patient expressed himself as relieved. The intestine was therefore sutured to the abdominal wall at the place where it had been opened and the other wound was abandoned. A third incision was made in the median line just above the pubes into the abdomen, and through this a drainage tube was passed into the pelvis and the pus washed out of the peritoneal cavity with salt solution. All these procedures were performed without difficulty under local anesthesia. After the operation the patient's pulse and temperature steadily fell. For the first few days feces were discharged through the artificial anus. Later he began to have movements of the bowels. The irritation of the skin of the abdominal wall by the escaping intestinal fluids was a source of considerable annoyance. The patient improved, however, and on April 18 the writer performed the operation for closure of the fecal fistula as described in the three preceding cases. At the time of writing, April 22, the patient was having a most satisfactory convalescence.

CASE 5.—*History.*—R. R., 25, single, was recently operated on by Dr. John T. Bottomley, at the Boston City Hospital, on the third day of appendicitis. He found the appendix acutely inflamed, adherent to pelvic brim, free pus in the abdomen and fibrin flakes on the neighboring intestines. There were two perforations near the tip of the appendix. After excision of the appendix the wound was packed and drained freely with iodoform gauze. The abdomen was washed with salt solution. Cultures from the pus showed *Staphylococcus albus and Bacillus coli communis.*

The patient made a good recovery from ether, but for two days after the operation no gas or feces passed the bowels. The pulse gradually rose, and on the morning of the third day the patient began to vomit and vomited dark brown material frequently. The abdomen was distended. The pulse was 140 and he was very weak, cyanotic and evidently desperately ill. He was seen by the writer and Dr. Munro in consultation. Dr. Bottomley performed enterostomy under local cocain anesthesia, making a median incision through the abdominal wall below the umbilicus. On opening the abdomen the intestine was injected, but there was no excess of fluid in the cavity. A loop of intestine which presented under the wound was sutured to the aponeurosis of the rectus muscles by continuous silk sutures and opened. There was an immediate discharge of gas and feces. A bent glass tube was tied in to the intestine attached to a rubber tube which went over the side of the bed. Soon after the operation the patient stopped vomiting and was able to take liquids by the mouth. During the next three days his condition gradually improved. There was copious discharge of feces through the enterostomy wound. The bowels moved by the rectum under the influence of enemata. On the fourth day, however, the abdomen began to distend in spite of the movements of the bowels, and the pulse to rise. On the fifth day the patient began to vomit, and died on the morning of the sixth day.

In this case, it is evident that the operation did not save life, but its effect in relieving the patient was marked. He was moribund at the time when the operation was done, and the improvement which took place seemed almost miraculous. Hopes were entertained of his recovery. There is no question that he died of continued peritoneal infection, which in itself is sufficient to kill many patients even without obstruction of the bowels. No one regretted having made the attempt to save him by enterostomy, for it was felt by all concerned that everything had been done to save the man's life. At a partial autopsy it was found that the opening in the intestine was just 8 inches above the ileocecal valve.

SUMMARY.

Enterostomy is indicated for obstruction or paralytic distention of the intestine from whatever cause, after the ordinary means for relief of such distention have

failed. It is especially applicable for distention after operations for acute appendicitis or general peritonitis. Under such circumstances it may restore to life cases in which death seems inevitable. Secondary ileostomy is the operation of choice. Local anesthesia is to be preferred. The subsequent operation for closure of the fecal fistula is usually safe and successful.

DISCUSSION.

DR. M. B. TINKER, Baltimore—Enterostomy has been used in selected cases of this kind at the Johns Hopkins Hospital for the past five or six years. It was introduced there by Dr. Finney, but has been used only in a few cases, for the reasons given by Dr. Lund. It is very repulsive to the patient to have a fecal fistula; the skin is usually excoriated around the fistula, frequently causing severe pain, and it is very difficult to keep the patient clean. In the last three years I have not seen secondary operation necessary for the closure of fecal fistula, however. The intestine should be brought up to the abdominal wall and sutured; a tangential enterostomy which does not bring the gut outside of the abdominal cavity, as in colostomy. Some operators have made a mistake in bringing the gut outside of the abdomen, thus making a secondary operation always necessary. When the fistula persists, as it frequently does, for weeks, excoriation of the skin is a source of great discomfort, and the patients can be greatly relieved by putting them in a tub of warm water. Cases in which enterostomy is of great value are the cases of obstruction following perforation with localized peritonitis. To break up the adhesions and relieve the obstruction would mean the soiling of the entire peritoneal cavity. By the enterostomy we relieve the obstruction at once, and in most cases the obstruction coming from distention gives no further trouble after this is relieved. Leaving an enterostomy opening, instead of closing perforations in the intestines also saves lives in many cases. Dr. Follis did this in a case of typhoid perforation in which the patient was in an extremely low condition, and the very least intervention seemed indicated. This can be done much more quickly than suture of the perforation, and in the case mentioned the patient made an excellent recovery, in spite of his bad condition at the time of operation. In a case of gunshot wound of the abdomen with eleven intestinal perforations, the patient was brought into the hospital in a very low condition with the abdomen full of blood. Extensive intervention meant death, and instead of attempting to suture all the openings, a loop of intestine with four perforations in it was resected, the ends brought out to form enterostomy openings, and was gauze-packed about. Recovery followed in this case also. While not to be advocated in all cases, the use of this procedure in certain critical cases of obstruction from peritonitis has, I believe, saved a number who would have died from a more extensive operation.

DR. MILES F. PORTER, Fort Wayne, Ind.—Some years ago I had the honor of reading a paper before the Mississippi Valley Medical Association, in Detroit, in which this subject was referred to, and a year or two afterward, 1897, I read another paper on the subject of tympany. I tried to show in those papers that there were many cases of peritonitis that died that might and would have recovered had that one symptom been overcome. This statement I had at that time been convinced was correct by at least one case, and since then I have seen it corroborated in a number of cases. I have seen cases of peritonitis with enormous quantities of pus, in which the patient was in such a deplorable condition from the tympany that I felt warranted in relieving the tympany by opening the gut before I drained the abscess, and I have had the satisfaction of seeing at least one of these cases get well.[1]

The point that I wish particularly to emphasize is that many of these patients die because of the tympany, and if that is relieved the patient will get well, or so far recover as to enable one to perform an operation later to remove the original cause of the peritonitis.

Now, in regard to the occurrence of fecal fistula, I wish to emphasize a point made by the last speaker. The fistula will not need to be closed by the surgeon, if it is properly made to start with. If the gut is simply attached to the peritoneum, it will close itself and render a subsequent operation unnecessary.

1. Medical News, July 31, 1897.

DR. C. P. THOMAS, Spokane, Wash.—It appears to me that we—particularly the last speaker—are getting the cart before the horse. If we simply attach the bowel to the abdominal wall and make an incision in it, disregarding the pathology, we will get left in a great many cases. I do not believe one case in a hundred of fulminating appendicitis, for instance, where we always have intestinal paralysis, would get well if we simply did an enterostomy.

If we will first remove the cause of the intestinal paralysis, it will not often be necessary to attach the bowel to the abdominal wall and open it. After most intraperitoneal operations there follows some peritonitis, with obstructive symptoms; the time at which we can safely say a given case will recover, or not, without enterostomy, is not to me a definite one, and I believe the cases that recover with enterostomy would have done so without it. The half dozen cases that I have operated on, died, while others apparently as bad recovered without operation. I heard Professor Nicholas Senn once say that his experience had been the same.

We should not expect intestinal drainage to cure peritonitis, but should first remove the cause, leaving enterostomy as a last resort. High rectal injections of alum solution will often hasten normal bowel movement.

DR. JAMES B. BULLITT, Louisville, Ky.—I think we have gotten the cart before the horse, or at least the last speaker has, as I think there was no question raised by the essayists regarding the cure of appendicitis by making an enterostomy. The conception of the author evidently was that the cases of appendicitis should be dealt with in the best possible manner, and when, after the operations have been performed, the condition of the patient demands it, that this operation be done. I believe that all of us, who have not grown very old, perhaps, have been confronted by the most depressing problems. The patient that apparently should be getting well develops a tympany, and the surgeon is always undecided whether or not this tympany will be overcome in the particular case, or whether, if the tympany be unrelieved, the patient will be carried beyond the reach of the surgeon, and death result. Under these circumstances, I say that the younger members of the profession find themselves in the greatest embarrassment, and the older members of the profession, perhaps, are not prone to give them the greatest amount of comfort. Under these circumstances the operation as outlined by the author would seem to me to be the most rational form of procedure. It is one with which good surgeons have been familiar for many years. I am sure that in many cases it is the best and most conservative operation to do, as we can never tell just when these patients have passed the danger line, and if we do not do it, we have to trust to luck that the patient will pass safely by the probabilities of death on the next day.

DR. F. A. DUNSMOOR, Minneapolis—I thought when the essayist was reading his paper that I would have given much at his age to know what he does now, because I am sure we hear of many cases being relieved by this measure. I am sure the essayist doesn't mean to convey to any of the pessimistic men who wish to criticise him, that the operation will cure every person who has intestinal paralysis, obstruction, or who has infection, whether following an operation or a primary condition. It certainly is an important thing to recognize that there is an opportunity of preventing death following postoperative obstruction in this region. When we have made out the fact that our patient has been badly poisoned, either because of the pus previously present, or from operative infection, either obstructive or septic, then we know that something else has taken place within the intestinal tract beside digestion, and we also know that there is a large amount of toxic material there which is going to do harm. It can not get out if there is obstruction or paralysis of the bowel, and we should do as much as possible for relief with as little manipulation as possible, and not hunt all around the abdomen for the perforation. I believe patients have been killed

by attempts of surgeons to relieve the condition by suturing the perforation, the local poison being distributed to the general peritoneal cavity with overwhelming results. I open the gut, empty and wash it out, if possible, by means of the normal saline solution. I have not had the opportunity of trying the alum solution, but I am sure that I have seen cases cured, not only by the alum method, but by making a temporary window in the gut at the time, and doing a subsequent operation for relief of conditions present.

DR. FRED B. LUND, Boston—In regard to the fistulas, I would rather close them than wait for Nature, and I think the patients would rather have this done. I do not advocate enterostomy in all cases of peritonitis, nor do I claim it is an unfailing cure. I expressly stated the fact that all other intestinal measures should be employed first, before this operation is undertaken.

PROLONGED INTUBATION TUBES,

WITH A METHOD LEADING TO THEIR EXTRACTION.*

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DETROIT.

The field of modern scientific research can demonstrate few more valuable therapeutic triumphs than the results displayed by antitoxin and intubation in laryngeal diphtheria. The fondest hopes of Roux, Berhing and O'Dwyer have been realized. It remains for us, their pupils, only to defend and apply the principles which they have so perfectly laid before us. It would seem that results as marvelous as our collective investigations absolutely demonstrate ought to be sufficient, but there is much missionary work yet to be done. It is not uncommon to find at the present time many cases of laryngeal diphtheria under observation for some days without the administration of antidiphtheritic serum while operative interference is postponed until the patient is moribund.

During a recent trip abroad it was my privilege to meet those enthusiastic pioneers in intubation, Baginsky of Berlin, Egide of Rome, and Massei of Naples, and to find that their troubles with the retained tubes were the same as ours. In view of the brilliant results with intubation and antitoxin in America and on the continent, the incomprehensible antagonism of the followers of Lennox-Brown in England calls forth a most hearty condemnation. The reserve with which intubation is received in Great Britian is almost beyond pardon. A review of the literature of this operation in the *British Medical Journal* for the last decade reveals just seven references to it, six of which are short abstracts from articles published on the continent only, the other one embracing reports of the papers of O'Dwyer and Northrup which were read before the children's section of the British Medical Society.

The masterly thesis of O'Dwyer on retained tubes, and I believe the last important article which he published, is a contribution to our literature that can not be equaled. My work has been along the line of Dr. O'Dwyer's suggestions, and it is with the hope that a report of the results achieved with astringent applications to the larynx in such cases may lead to a wider field of usefulness for these agents that I present this subject for your consideration.

Prolonged intubation, as you know, is a term applied to conditions necessitating the use of an intubation tube for a longer period than six days, while "retained tubes" is an expression usually meant to include the prolonged period with a more extensive or indefinite course of time. Conditions rendering the continued use of the tube necessary are fortunately rare. Some observers report 2 to 3 per cent. of these cases occurring in each 100 operations. Extensive contributions to the literature have been made by O'Dwyer, Bokay, Chetalain, Rauchfuss, Trumpp and E. Rosenthal.

The observations and deductions which I have to make in this paper are gathered from a personal experience of 300 intubations, in addition to the use of antitoxin; 230 of these were reported before the Michigan State Medical Society two years ago. The first 100 intubations gave a mortality of 31, the second 100 showed 20 deaths and the third 100 18 deaths; being a total of 300 intubations (with the use of antitoxin) and 69 deaths. With two exceptions these operations were performed in private practice and for the most part among the ignorant, superstitious, foreign element of our city, whose children are given but little attention in sickness or in health. Two hundred and thirty-one of these intubated children have recovered. Of this number 8 have required "prolonged intubation," and in addition two cases from other operators have been referred to me for treatment.

The pathology and etiology of "retained tubes" include a consideration of traumatism during intubation and extubation, and traumatism while the tube is in position. The presence of pseudo-membrane, edema, superficial erosion, deep ulceration of the mucous membrane, cicatricial contraction, exuberant granulations, collapse of the cartilages, abductor inadequacy and paralyses are the usual causes. In certain cases one may ascribe the compression of the recurrent nerves to tuberculous ganglia, pleural thickening or some unknown neurotic phenomenon.

The admirable autopsy reports of O'Dwyer, Nicol, Bokay, Meslay and Ganghofner have thrown much light on our difficulties. The latter found four with erosion of mucous membrane among 42 intubated cases. Meslay reports a case of ulceration of the trachea and mediastinal abscess. Bleyer shows 1 per cent. of ulcerations in prolonged cases. Carr gives the details of an ulcer one-third of an inch long caused by the string. He also reports instances of ulceration through the anterior tracheal wall and cartilages. In this case a 3-4 tube had been used in a child 2 years and 8 months old. Bokay found 18 superficial and 3 deep ulcerations in 72 autopsies. The tube in one case had been removed at 24 and 48 hour intervals and the string left in. Avendano, on the contrary, performed 10 autopsies where the tube had remained for many days and found in one only a small loss of mucous membrane. The spasmodic ulcerous condition, or what the French term "the tubard," is characterized by numerous rejections of the tube. Bryant reports a case with three auto-extubations in fifteen minutes. Such cases may require special corrugated tubes or morphin in small doses. The short tube of Bayeux is subject to more frequent rejection than that of O'Dwyer on account of the enlargement at the cricoid ring where ulceration of the cartilages occurs in places. In such events the laryngeal nerve endings become exposed, thus rendering the reflex accident of auto-extubation very painful or annoying. The spasm of the intrinsic and extrinsic muscles of the larynx must be allayed by proper treatment applied to the sources of irritation, viz., ulcerations. This class of cases usually

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, A. C. Cotton and H. E. Tuley.

present the phenomena of collapse of the larynx attending muscular inadequacy. A tube of correct size must, therefore, be placed in the introductor in preparation for this emergency before extubation is performed.

The diagnosis of the exact condition in the larynx is usually very difficult or impossible. There are a number of clinical evidences which are of great value, however, in differentiating and locating the trouble. Laryngoscopic examination is recognized as the ideal method, but among younger children in private practice it is found to be extremely difficult and unsatisfactory. Dangerous reflex spasm may also result from it. The history of unskilful operating or the use of a tightly-fitting tube is usually sufficient. F. L. Taylor's recommendation to use a tube in number next above the age of the child should receive sharp criticism. His report of 26 recoveries in 36 intubations following this procedure shows 22 tubes remaining in the larynx from five to eighteen days. The frequent obstruction noted in reintubation is due either to edema at the entrance of the larynx or subglottic erosion with attending edema. These conditions can be suspected from the difficulty encountered in introducing the tube. The indications of ulceration may be considered, first, as bloody expectoration following gentle extraction and continued pain over the larynx. Besides eroded black spots may appear on metal tubes, or calcareous deposits with disintegrated tissue from the points of contact with the ulceration. There may be frequent and continuous rejection of the tube, the development of a late hemorrhage or a gradually increasing dyspnea, differing from a spasm of the glottis. The prolonged presence of pseudo-membrane can usually be determined by the exfoliation of small pieces during the second week or by the development of reinfected areas elsewhere.

In the last 100 intubations I have had only one prolonged tube—a case of edema that responded to treatment in ten days and after the third extubation. Every case of intubation requires the most careful prophylactic treatment, and traumatism and pseudo-membrane as causes of prolonged tubes need not exceed 1 per cent. The early administration of sufficient antitoxin is of the greatest importance. Ten to fifteen thousand units without deleterious effects are reported to have been given by some observers, and the tendency to give a larger dosage of from three to five thousand units is very general. A minimum dosage of three thousand units in every laryngeal case, I believe, would prove efficient prophylactic therapy in cases of persistence of the membrane. Three cases of this variety occurred in my early experience. One required the tube nine days, another ten days, the third—a girl of 2 years and 9 months—expectorated laryngeal exudate for twelve days. She wore the tube seventeen days and required twelve intubations. In pre-antitoxin days Huber reports that sixteen days were not infrequent on account of pseudo-membrane. The statements of Quodfleig that not more than three intubations must be done on the same patient are therefore challenged. Experience in this last case showed me the great necessity for a large supply of tubes. My only No. 2 obturator broke at one of these operations, and in attempting to pass a No. 3 tube I nearly lost my patient. I subsequently had a case for instruments so arranged as to hold more than four complete sets of tubes, with all the necessary tracheotomy instruments.

The problem of the prevention of traumatism is more than half solved in the selection of a properly fitting tube. Fifty tubes are a good working number, and two sets of smaller tubes are essential to every operator. The greatest care should be exercised in cleaning the tubes, for if any roughness or other imperfections exist it may cost the life of a patient. Where pathologic conditions are suspected new tubes are found more satisfactory. The metal tube in prolonged cases is dangerous and should be discarded. Three common methods of extraction are presented: the string, expression and the instrumental. As extubation is more difficult than introduction, traumatism is frequently the result of the manipulation. The expression of O'Dwyer tubes is a dangerous practice and should be avoided. In private practice the string should be left in place if possible when there is an extension of membrane below the tube. Numerous modified instruments have been devised to make the operation easy and harmless, such as Dillon Brown's hook method and the electro-magnet of Collette of Antwerp, but the O'Dwyer instruments fill all the requirements when in careful hands. Unskilful use of the extractor and excessive pressure on the epiglottis with the finger may lead to edema of the soft parts or of the subglottic tissue or arytenoids, thus making reintubation necessary. Bleyer reports fifteen permanent lesions of the larynx from this cause.

The great importance of dispensing with the tube as early as possible is certainly recognized, but daily extubation with this object in view is impracticable in private practice. A safe general rule which I have found successful is to extract all tubes on the fourth day. A liberal dose of antitoxin twelve hours or more before intubation renders the success of this routine procedure almost certain.

Perfect quiet after the removal of the tube is of the greatest value. The application of ice cloths over the larynx and the use of the croup tent are not to be resorted to if quiet is to be sacrificed. A child difficult to manage is given a dose of paregoric or codein and phenacetin one hour before operation, which may be repeated if necessary. The child is not allowed to speak or cry, if possible, and with no recurring dypsnea during the subsequent two hours recovery will usually be complete. If reintubation is necessary after the sixth day a definite line of exact procedure and therapy can be outlined according to a diagnosis of the condition attending each case. When on the sixth or seventh day dyspnea suddenly returns and we have evidence of pseudo-membrane or we suspect a reinfection, 1,500 or 2,000 units of additional dosage will check its development, and the prognosis will seem especially good. In conditions of this kind and in paralysis and muscular inadequacy complicating diphtheria, large doses of strychnin are extremely valuable. In many cases efforts to dispense with the tube may be made at two or three day intervals. Rubber tubes may be used, and at reintubation the next smaller size may be inserted in order to change the points of pressure. Having determined as accurately as possible the location of the eroded surfaces, an alum ointment (12 per cent.) may be applied to the surface of the tube and intubation again performed. The string protected by adhesive plaster can be left, to insure the utmost gentleness in extubation.

Although the treatment of these cases is attended continually by annoyances and difficulties that are trying to the surgeon, the results are exceedingly satisfactory. The statement of Goodall of England that frequent expulsion of the tube is an indication for tracheotomy, the observations of Sevestre and Eschevick that tracheotomy should be performed if the tube can not be removed within a week, and the opinions of many German and

French operators that tracheotomy must be performed if the tube can not be dispensed with after three intubations, are mentioned to be condemned as unjustifiable and unnecessary procedures. "Tracheotomy is the worst possible thing that can be done," said Dr. O'Dwyer, "for healing of the ulceration is promoted too rapidly after the operation, and a subglottic stenosis results."

Recent literature from Italy and France confirm our own methods. Dr. Tanturri of Naples reports in detail a most interesting case of prolonged tube. Forty intubations and 136 days were required. Alum and ichthyol gelatin with the O'Dwyer tube proved successful. In conclusion, he says that the perforated tube of O'Dwyer is of priceless service in exuberant granulations situated in the region of the cricoid, and that ichthyol is the best medicament. Roe of New York State reports three interesting cases following simple laryngitis with recovery, the longest of nine weeks' duration. Louis Fischer's plan, unknown to me until recently, carries out most efficiently the same suggestion as O'Dwyer's one case. He used 10 per cent. alum or ichthyol-gelatin. The objection to gelatin is the greater difficulty of its preparation, and, like vaselin, it has a low melting point, but mixing with agar any desirable melting point can be obtained.

The method of direct medication to the larynx in cases of prolonged tubes deserves a more extensive use. Argyrol, menthol or resorcin preparations should give good results, and adrenalin applications are recommended for cases of edema. It is thus possible to treat the larynx in all cases requiring reintubation. Of the ten cases of prolonged tubes which occurred under my observation three were caused by persistent pseudo-membrane; two, of ten days' duration, were caused by edema at the entrance of the larynx, and five were necessary on account of subglottic or other laryngeal erosions or ulcerations.

Although some observers report to the contrary, the prognosis in this country would seem very good. The alum treatment was successful and all recovered but one. The fatal case, 2 years of age, died on the seventeenth day after intubation. Autoextubation without the knowledge of the mother occurred while she slept, and when the mother awoke the child was dead. The tube had been out several hours the previous day, the child's strength was good and the case seemed to be progressing favorably. The fact that hospital treatment is absolutely necessary for these cases is recognized, but the parents of the children of our foreign element stubbornly refuse to be separated from their children. Less than a dozen of my 300 intubations, including one case of prolonged tube, have received hospital care or the services of a trained nurse.

The two most interesting and difficult cases I report in detail as follows:

CASE 1.—M. B., aged 5 years, had been treated 48 hours for spasmodic croup when Dr. McColl took the case, Jan. 30, 1901. The true condition of diphtheria was recognized immediately and a consultant called. Intubation was performed with considerable difficulty, as the tube was too large. After five days this was extracted again with difficulty. Labored breathing began immediately and reinsertion of the tube was necessary. On February 11 a third extraction was made. The dyspnea gradually returned, and on the 23d the case came under my observation, when intubation was required, and a number three tube coated with alum and vaselin (12 per cent.) was used. A tough ring of cicatricial tissue could be felt at the entrance to the larynx and it was evident that a subglottic stenosis existed. After a series of auto-extubations the parents allowed the child to be removed to the hospital. A No. 2 tube was inserted and the string left in. Three applications of alum and vaselin at three or four day intervals, together with tonic medication and steam sprays succeeded, and on March 13 the tube was permanently removed—a period of forty-two days after the first operation, during thirty of which the wearing of the tube was necessary. The two weeks after extubation was marked by considerable dyspnea coming on each evening, but the croup tent and the use of anti-spasmodics were sufficient to palliate the symptoms. At the present writing (two years later) the child is in perfect health.

CASE 2.—Eva B., aged four years, patient of Dr. O. T. Toepel, was intubated June 20, 1899, for stenosis from laryngeal diphtheria. As a No. 4-year tube was too large, the next in size was introduced, and 1,500 units of antitoxin given. Thirty-six hours later the membrane had extended below the tube, and a hurried extubation was necessary. A longer and larger No. 4 tube was then introduced, and the case progressed favorably. Extubation was attempted on the fourth day, but it was necessary to quickly replace it on account of dyspnea promptly returning. Extubations were attempted at two and four day intervals. Three treatments were given the larynx by applying alum ointment along the tube before operation. This method was successful on the twenty-third day, and the child made a perfect recovery.

When these measures fail we have the various modifications of the tube to depend on. The granulation or ulceration tube can be made with a larger (or built up head) and a lower and broader swell. The lines of contour can be changed so as temporarily to remove the pressure from any injured portion of the mucous membrane.

Successful instances of the use of these tubes and retained for some months are reported by O'Dwyer, Northrup and Rosa Engelmann.

In conclusion I would make the following summary:

Cases requiring a tube more than six days should be classified as prolonged.

Rubber tubes only should be used.

Liberal doses of antitoxin are required in cases due to reinfection or persistence of the membrane.

Large doses of strychnin are of value.

Smaller or modified tubes coated with alum ointment or alum gelatin should be introduced at each reintubation.

The string may be left in place with advantage in many cases.

When these measures fail, the "granulation tube" may be used.

Tracheotomy is never indicated.

32 West Adams Avenue.

DISCUSSION.

DR. CHARLES G. KERLEY, New York—I have seen only one case of prolonged retention of intubation tubes in my own practice, and two cases in the practices of others. However, my general experience with intubation leads me to indorse everything that has been said in this valuable paper. I do not think that retained tubes are at all necessary. If the rubber tube is used, if it fits, if it is put in and taken out by one who knows how to do it, there should be practically no cases of prolonged retention of the intubation tube. In introducing the tube force must not be used; when it is required it means that the tube is too small, and that laceration will occur. A properly fitting tube will pass in with practically no force. I do not find extraction at all difficult, although I make use of the ordinary extractor of the O'Dwyer set. The finger must, of course, be used as a guide. It is a temptation, I admit, to leave the string, but in older children there is great danger of the child getting hold of the string and pulling out the tube. The only use of the string is in the event of membrane loosening below the tube, making it possible for the tube to suddenly become plugged, thus requiring its immediate removal by the nurse or other attendant.

I think in the future we shall hear much less of these cases of retained tubes, because we have learned how to use antitoxin. I never give a laryngeal case a smaller dose than 3,000 units. The last case I had was one in which I was called late in the attack, and the child had been treated for five days for ordinary croup. Suddenly laryngeal obstruction developed, and I was hurriedly called. I gave the child 1/50 of a grain of strychnin and 1/100 of a grain of digitalin hypodermically before daring to insert the tube. As soon as the tube had been introduced I gave it 3,000 units of antitoxin, and in the course of the next sixteeen hours, 6,000 additional units.

The intubation tube was removed on the fourth day, and a re-introduction was not required. The fourth day is the time, in my opinion, to remove the intubation. I fully agree that tracheotomy has no place alongside of intubation. In my own case of retained tube I believe the cause was an abductor paralysis, for I was unable to find any lesion on careful examination; there was only obstruction to inspiration.

DR. EVERETT J. BROWN, Decatur, Ill.—The first case of intubation which I did was in a patient six miles from town, a boy of 7 years, who had been given up by two other physicians. I inserted the tube, giving complete relief. The tube was left in until the sixth day, and the child recovered without any return of the dyspnea. I noticed in a Vienna clinic that they took out and inserted the tube daily, but I was uncertain whether this was considered desirable for purposes of cleanliness or for purposes of clinical instruction. Recently I was called to do an intubation on a child of 5 years who was nearly comatose. I failed to introduce the tube after three attempts. On the fourth attempt the tube was coughed up after a few minutes, and with it a thick membranous cast, which extended down even to the finer ramifications of the bronchi. I had a photograph taken of it, which will soon be published. In this case the obstruction was as much in the bronchi as in the trachea. The child was at once relieved after coughing up this cast, but it died of toxemia, and not of dyspnea, about twelve hours later.

DR. B. R. SHURLY, Detroit—I wish to emphasize the method of applying alum and vaselin to the tubes. So far as I have been able to ascertain, this method is comparatively unknown to those who practice intubation. When there is difficulty in extracting the tubes this method is of the greatest value. It has been used in Italy in one or two cases, and Dr. Louis Fischer has also tried it. This suggestion was thrown out in the last paper written by the lamented Dr. Joseph O'Dwyer. I simply advocate leaving the string in those cases in which the membrane is below the tube, or in those cases in private practice when it is impossible to reach the child quickly in an emergency. I think the frequent intubations and extubations referred to as occurring in Vienna hospitals were entirely unnecessary, and they appeared to me to be done largely for purposes of clinical demonstration.

CONTINUED FEVER—NEITHER MALARIAL NOR TYPHOID.*

T. J. HAPPEL, A.M., M.D.
TRENTON, TENN.

It may seem that the subject of continued fever is becoming too common in our meetings to merit any further time or discussion, but, so long as we are met with the *ipse dixit* of some bookmaker, that there are but two types of continued fevers, and that all such fevers must be classed with one or the other, in fact must be either malarial or typhoid, then those of us who do not accept any such dogmatic statements as necessarily true, have a right to give our reasons for our dissent. Our medical brethren in the north, as a rule, contend that every continued fever is either typhoid or malarial, while in the south many of us are sure that we have a third fever, which merits a careful study, the mortality of which is so slight that opportunities for postmortem study have been almost *nil*.

The blood and secretions have been examined microscopically and chemically so far with negative results. A sufficient number of examinations have been made of the blood to show that it does not respond to Widal's test, nor does it show the presence of the *Plasmodium malariæ*. In none of these cases has the estivo-autumnal parasite or the *Bacillus typhosus* been discovered, yet we are told by the bookmakers that the technic was faulty; that the examinations were improperly made. While not prepared and not competent to make any of these examinations, or to apply properly any of the tests in these cases, I have too much confidence in the ability and honesty of the laboratory workers who have made these reports to doubt their correctness. (Just at this point I would offer this suggestion, that no specimen sent to a microscopist or chemist should be accompanied by any clinical history of the case, to avoid the warping of the judgment of the examiner. He should be requested to examine the specimens sent for the evidences of malarial or typhoid fevers, and to report the result of his examination.) We can more often find what we look for than the unknown or unexpected; hence, I say that the clinical history of the case should be withheld.

The teaching of the present day, as pointed out by the learned Dr. Jacobi in an address at Saratoga before one of the Sections of the American Medical Association, in which he spoke with no uncertain sound, does not develop the skilled clinician. The bedside study of diseases has been relegated to the background and the student is impressed with the idea that the microscope will tell him positively all about his case. In many of our diseases the microscope is as yet powerless. One laboratory worker reports and describes a specific germ for a disease, and another soon after reports one entirely different.

In this fever to which I invite your attention the microscope fails to show the *Bacillus typhosus* or the *Plasmodium malariæ*. Reference was made in a former paper to the fact that a number of skilled laboratory workers had investigated the secretions and blood, both microscopically and chemically; by one in more than one hundred cases, and by another in thirty-eight cases, with the same result in each, both asserting positively the absence of anything distinctive of either typhoid or malarial fevers. In numerous other instances the same results have been obtained by others. Yet we are told that Dock of Ann Arbor has proven conclusively that the cases of so-called continued malarial fever in Texas were cases of true typhoid fever, and Dr. Osler asserts that he feels sure that all the continued fevers except those of thermic origin will yet be divided into but two classes, malarial and typhoid, which position is equivalent to asserting that our microscopists who have reported otherwise were not qualified to properly investigate the etiology of these fevers and that our chemists had not skill enough to apply the tests necessary in that part of the laboratory work. His argument is along this line:

> Typhoid fever in Baltimore and Philadelphia, where malaria exists, is not essentially different from the same fever in Montreal where no malaria is found; hence the other continued fevers in the south where malaria exists and where typhoid fever is rarely found must be true malarial fever.

This can not be said to be a first-class argument. A fever that is totally distinct in every respect from the

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

malarial or typhoid fevers except one, viz., duration, can not of necessity be one of the two types. Not many years ago we recognized only two types of the eruptive fevers: measles and scarlet fever; yet recently measles has been divided into rubeola and rötheln, and roseola is certainly distinct from either, and within the last two years an effort is being made to divide scarlatina, as it had been known, into two distinct diseases, each having its own *causa causans*.

Our boards of health have not yet accepted the doctrine of a disease resembling variola, pseudo-smallpox, having the same relation to variola that rötheln does to rubeola, and the new differential of scarlet fever does to true scarlatina. This effort on the part of those standing high in the councils of medicine to decry anything new not originating with themselves does not tend to encourage individual research. The impetus to medical and surgical investigation along many lines has often been given by the country practitioner or surgeon, as evidenced in the cases of Marion Sims of Alabama and McDowell of Kentucky.

I lay no claims to the discovery of a new fever, but I do take the position that we have here in the south a continued fever that is neither typhoid nor malarial.

In a former paper, I referred to a number of such cases treated by me in the last ten years, and since that paper was written a number of others have been under my care, and very favorable opportunities have been seized on to study these cases at the bedside. The conclusions have not been verified by any autopsies as all of them have recovered. Since July, 1902, I have treated six cases (a total of about one hundred cases), lasting three weeks in the shortest to five in the longest. In each one of these cases the diagnostic points were strongly in evidence. The first case was ushered in by a cold stage, not the chill of malarial fever, but rather the algid stage of la grippe followed by a slight rise of fever, and on the following day at about the same hour more rigors with intense headache and a temperature of 104. The parents, supposing they had an intermittent fever with which to deal, had given calomel, followed by quinin in full doses until the daughter was cinchonized, as evidenced by deafness, etc. When called on the fourth day, I found a normal pulse, profuse perspiration and, while the parents thought her free from fever, a temperature of above 104, no vomiting, no special complaint except headache. Concluding that I had a malarial attack to deal with, I increased the number and size of the doses of quinin sulphate so as to give between 25 and 30 grains before the time for the next paroxysm on the following day, with directions to continue until my return in 48 hours. My next visit showed no effect from the quinin except to increase the deafness and to disorder the stomach and destroy the appetite. I found pulse 78, temperature 104, no tympany, no engorgement of the liver or spleen, no broad flabby tongue, no jaundice, no special complaint about anything except headache. I abandoned the further use of quinin, and prescribed salicylate of soda and carb. guaiacol as follows:

℞ Sod. salicylat. ..... ℥iii
Guaiacol carb. ..... ℥i
Milk of magnesia ..... ℥ii
M. et ft. Mist. S. shake well. Teaspoonful every four hours.

A mixture of aconite and gelsemium was prepared to aid in reducing temperature, and for the same purpose frequent sponging with tepid water was directed. On my next visit there had been two cold stages in each 24 hours, but the temperature had not risen above 103. The treatment as outlined above included free and frequent spongings with tepid or cold water, as preferred by the patient, and when the temperature resisted these measures and persisted in remaining up to 103 degrees, 5 grains of acetanilid to reduce, but not to be used if it could be avoided. Only 9 grains of quinin sulph. each day were given until the case fully recovered, which required four weeks from date of going to bed. In this case there were two well-marked rises of temperature in each 24 hours. There was no anorexia, and not a single point of resemblance in the case to typhoid fever.

In one of my other cases the attack was ushered in, or, rather, preceded by an attack of irritation of the alimentary canal, amounting to almost a case of enteritis, caused by the immoderate and excessive drinking of ice-cold lemonade at a Sunday-school picnic. For several days all symptoms were masked by the frequent small, griping, mucous discharges from the bowels, the excessive thirst, tympanitic distension, and an inability to retain anything taken per os. As these symptoms subsided, leaving the whole abdomen tender, the tongue, which had been red and small and long, returned to its normal state, the thirst became less, and the rises in temperature, in spite of all that could be done, were three in 24 hours. Quinin per rectum, after a failure to prevent these exacerbations per os, had no effect on the fever. In this case I was not content to use one form of quinin alone, the sulphate, but resorted to the bi-sulphate, and later to the salicylate. At the end of ten days, no impression having been made on the course of the disease by the antimalarial remedies used, they were abandoned, and the guaiacol-carbonate and soda salicylate of the first case substituted, and under this course the patient was carried through a sickness lasting five weeks, to be followed in two weeks by a relapse from imprudent eating. This lasted two weeks.

The third case lasted four weeks, receiving thorough antimalarial treatment for one week, which was abandoned as useless, and the medicines referred to in Cases 1 and 2 substituted, supplemented later on by a mixture of tr. iodin and Fowler's solution every four hours. The temperature chart showed four rises of temperature in each 24 hours, and later on three, then two, and then one. In this case, from the effect of quinin used during the first week, the digestive organs were weakened so that only malted milk could be retained for a few days, though a desire for food was ever present, and the patient, a female, aged 10 or 12 years, never failed to report herself feeling better, and when her temperature would rise to 103 or 104, the pulse rate was never higher than 90. There was never a dry, harsh skin, never bilious vomiting, never nausea except that which resulted from the use of the quinin the first week. She was always ready to eat, but never thirsty. All the secretions were normal, the bowels generally acting once every 24 hours. At one time she was allowed by her mother to eat sardines, with no unpleasant sequences. At the end of the fourth week the fever ceased, terminating, as shown by the chart, by lysis. In this case there were no profuse sweats as there were in the first and second cases.

Case 4 was a boy, aged 8 years, just on the opposite side of the street from Case 3. It was very mild, showing only two rises of temperature in 24 hours. This patient was saturated to deafness with quinin, which was then laid aside except 6 grains per day, and the guaiacol-carbonate and soda mixture alternated with the iodin and Fowler's solution used throughout the

case. On the twenty-first day the fever terminated by lysis. This patient was hungry from the time he was put to bed until he was dismissed. At no time was there any derangement of any of his secretions. With his light diet he became constipated and was given cascara two or three times each week. During the second week he was given four doses of calomel, gr. 1/10.

Case 5 was a repetition in every respect of Case 4. These cases are added to a long list of similar cases already treated by me, with only one death, due to congestion resulting from a disobedience of directions. While a few of the cases have lasted six weeks the rule is recovery in from three to four weeks. We do not expect, except in very young children, recovery before the end of the third week, and my invariable answer to questions of the probable duration of the disease and the prognosis is that they will recover, but not before the expiration of 21 days from the date of going to bed.

In my last case treated (November), the temperature, after dropping the quinin, slowly but steadily decreased each day, until on the eleventh day from going to bed it dropped to normal and did not rise above 100. This case appeared to be a duplicate of Case 5. But the slight rises of temperature alone and the little difference between the daily maximum and minimum point is no indication of the duration of the attack, several of such cases having lasted from four to six weeks, and in one case especially referred to in one of my former papers on this fever, after continuing for three weeks with a maximum temperature of 101 to 102, during the fourth and fifth weeks there were daily ranges from normal to 104 and over. These cases are the ones we expect to terminate by crisis with profuse sweats.

The cases of this season have demonstrated the fact most conclusively that quinin will not cure this type of fever. I have used it in varying doses per os and per rectum. In none of these cases was the use of it discontinued until decided deafness was produced, no attention being paid to any of the other symptoms of cinchonism. I have not used any of the quinin salts in from 20 to 40 gr. doses, never do, but have repeated in from 3 to 10 gr. doses until the effect was self-evident, and then have maintained this effect for from three days to a week and in some cases to ten days.

Reference has already been made to the use of microscope and chemical investigations in these cases, hence I will devote no further time to this branch of the subject, not being able to speak *ex cathedra* myself in the matter. I desire, however, to emphasize the point of difference from a clinical standpoint, and permit me to add that where the bedside study of a case teaches plainly one thing and the work of the laboratory another, I, for one, would strongly incline to the teachings of the sick chamber. It has been demonstrated time and again that the laboratory worker has agreed with the clinician in this fever, and yet the question of competency has been raised; while no question is raised in the case of other workers in the laboratory when they have discovered, or thought they have found the micro-organism for which they were looking. These cases have not, then, been ushered in, as a rule, abruptly by a chill, but have had usually for a few days or a week prodromes of malaise, then rigors, sometimes a slight chill, followed by a slight rise in temperature, which does not generally attain its maximum for from three days to a week. While this fever presents marked remissions, for the first week the remissions are not so decided in the second week, but are more so in the last week, amounting to intermissions with profuse sweatings. The chills, or cold stages, are accompanied by aching of sometimes one set of muscles and sometimes in all, resembling in that respect la grippe. After a day or two all pain ceases, and the patient complains of nothing. The remissions in this type of fever vary from one to four in 24 hours, and may be made more marked by sponging with tepid water in all cases by aconite and gelsemium in a few and by the coal-tar derivations in almost all of them. As a rule, sponging produces a condition of euphony and the patient never objects to its use.

There is no nausea and vomiting; never bilious vomiting, no jaundice, no clay-colored stools, no diarrhea, and, if any departure from the normal in this respect, constipation; no tympanites, unless it be due to some imprudence in eating; no tenderness over the abdomen; no rose-colored spots; no marked enlargement of the spleen or liver, unless there has been a history of malaria preceding; no anorexia, but, on the contrary, in many cases a desire for food all through the sickness; no broad, dry, flabby tongue, with its yellow pasty coating, but, as a rule, a tongue nearly normal in every respect, and when coated it is thin, of a light color. We have, in none of these cases, the pointed, narrow, dry, fissured tongue, with its red edges and dry, coated, and frequently cracked center. The tongue never bleeds, in fact the rule is all typhoid and malarial appearances are absent from the buccal cavities and the rest of the alimentary canal. The digestion is rarely impaired for food suitable for the sick, though I have noted abdominal distension when solid foods have been administered or allowed. There is no mental hebetude; in fact, generally the brain is not affected at all and ordinary business matters could be attended to by many of these patients with their usual business acumen. We never have any low muttering delirium as in typhoid fever, nor the active symptoms of malarial fever. The facies of the patient is normal, though he may be thin from loss of flesh attendant on the long drawn out fever. The muscular strength is not impaired as in typhoid fever, but its loss is in proportion to the length of the attack and heighth of temperature. In one patient sick six weeks, with a temperature reaching 105 daily for nearly two weeks, the loss of weight was slight, but the muscular tone was much impaired but was rapidly regained.

That these cases are probably toxenteric, as claimed by Dr. J. A. Witherspoon of Nashville, is evidenced by the fact that when relapses have occurred, in my practice they could be traced to imprudent eating. In no case of the many treated have I ever seen any tendency to epistaxis, though in some persons who were predisposed to tamper with their nasal organs, a few traces of blood have been noted in the secretions blown from the nose. The kidneys have acted, as a rule, normally, the quantity of urine being diminished where the skin has acted too freely. We have no dry harsh skin in this fever as in typhoid fever, nor is sweating any evidence as in malarial fever of a decrease in temperature, the skin in this fever being frequently bathed in perspiration when the temperature is at its maximum.

One of the most marked peculiarities of this fever is the disproportion between the pulse rate and the temperature. The ratio is frequently inverse, the pulse beating at from normal to 90, with a temperature of 103 to 105 or even higher, and the same may be said to be true in regard to the temperature of any exposed portion of the surface of the body. The hand applied to the pulse and then to the forehead would lead anyone not

using a thermometer to say that there was a perfect freedom from fever. This condition of things has been reported to me time and again, and yet when the thermometer was used in the mouth or axilla a high temperature was clearly shown. The hand applied over the bowels or to the back under the clothes and cover frequently shows fever. In these cases, no proper nursing can be done without the use of the thermometer every two hours, and a record is required to be kept in every case, with, however, a verbal direction not to disturb the patient when soundly sleeping. I might refer to the fact that it has been my experience that the nearer a direct proportion between pulse and temperature, the more confidently is a termination by lysis to be expected at the expiration of 21 days, and vice versa. In those cases of indirect ratios the termination is more likely to be by crisis and profuse sweating. In this class of cases, when the fever begins to intermit, strychnin is demanded. I might consume time indefinitely on the subject, but my time is up.

TREATMENT.

As to treatment, a few words. As soon as satisfied that the cases are not malarial, which should be determined in four days, quinin should be abandoned or used as a tonic in 3 gr. doses. I have obtained my best results by alternating the following prescriptions for an adult:

℞. Guaiacol carb. ..... ℥ii
Sod. salicyl. ..... ℥vi
Bismuth. lact. ..... ℥iv
M. Sig.: Take one teaspoonful every four hours.

℞. Tr. iodin. ..... ℥ss
Liq. potas. arsenit. ..... ℥i
Aquæ ..... ℥iv
M. Sig.: Shake. Teaspoonful every four hours. Alternate with the first mixture.

All symptoms are met as they arise, but unless some idiosyncrasy is manifested by the patient and the temperature runs high, these two prescriptions are kept up regularly night and day, but where the grade of fever is low they are usually omitted at bed time, say 10 p. m. I have used many intestinal antiseptics in treating this fever, but have had the best results this year from the above course.

The temperature is reduced by the free use of tepid or cold water, allowing the patient to choose.

The diet is liquid or semisolid, buttermilk being preferred to anything else when the patient can use it.

SOUTHERN FEVERS.*

WILLIAM KRAUSS, PH.G., M.D.
MEMPHIS, TENN.

In assigning this subject to me, our secretary said he wanted to show that some missionary work on the subject of fevers in the Mississippi Valley was being done, despite the controversies one sees about slow, continued, typho-malarial, and other fevers. With this idea of the scope of the paper, fevers of sepsis, tuberculosis, rheumatism, syphilis, etc., have not been given a place.

The cases presented are to be looked on as types of a number of cases seen by the author, and are believed to serve the purpose better than an elaborate discussion for which we have no time. None of the histories are complete, but enough is offered to make the point intended.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

1, ACUTE ESTIVAL FEVERS; 2, CASES WITH AUTOPSIES.

CASE 1.—W. B., male, white, aged 54, was brought to St. Joseph's Hospital in July, 1900, in an unconscious condition. From others it was learned that he was a passenger on a train coming to Memphis, and was suddenly taken with what was described as "congestion"—a term very much in vogue to denominate sudden fevers usually terminating in death. His temperature on admission two hours later was 108 F. The notes of the attending physician state that ice baths, subcutaneous injections of antipyrin and quinin had failed to bring about a change, and he died in six hours without ever regaining consciousness.

A blood examination had not been ordered, but the antemortem diagnosis read "pernicious malarial fever." The following from the necropsy report is of interest:

Autopsy five hours after death; rigor mortis; body of a very plethoric man; capillary stasis; ecchymosis; incision over calvarium bleeds freely; excessive hyperemia of encephalon; blood smears taken. Abdominal viscera pale, no marked changes; pleuræ free, lungs hyperemic; heart very firm, right ventricle full of dark fluid blood; smears from this also; no plasmodia in either. Postmortem diagnosis, sunstroke.

CASE 2.—Colored man, aged about 45; arrived at city hospital comatose in August, 1900. Attendant's notes showed rectal temperature of 107 F. on admission; plasmodia in blood. Was packed in ice, quinin and saline infusion subcutaneously; slight reaction; death next morning.

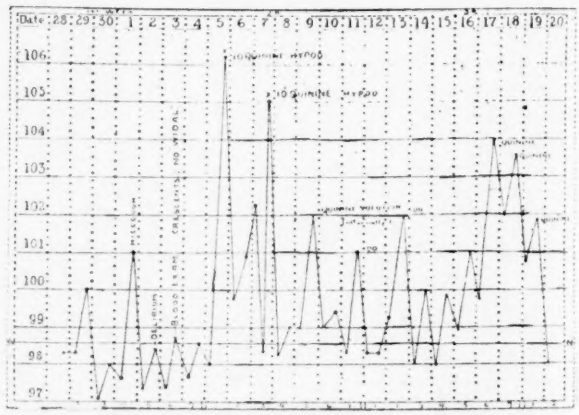

Chart 1. case 3.

Autopsy: Marked hyperemia of all the organs; heart contains thrombi which are nearly white.

The tissues and blood were taken to author for microscopic examination.

Smears from lungs and brain contained estivo-autumnal parasites, no crescents; splenic blood not fit for examination. Microscopic sections showed marked pigmentation in liver, spleen, kidneys and lungs. Pigment is siderin, not melanin. Very marked fibrous endarteritis, especially of the coronaries, doubtless syphilitic. Tissues had been in formalin very long and efforts to stain parasites in the sections proved unsatisfactory.

These two cases are reported as different comatose fevers with very similar symptoms. If the attendant of the first case had made a blood examination he would not have fallen into the error of giving quinin to a patient with sunstroke—it was a serious mistake.

II. CONTINUED ESTIVAL FEVERS WITH DIARRHEA, 2 CASES, WITH ONE AUTOPSY.

CASE 3.—J. M., aged 26. Admitted to St. Joseph's Hospital Sept. 28, 1899. Had been sick at Little Rock, Ark., with dysentery for a week; had had vomiting and daily chills. On admission showed abdominal tenderness, slight tympany, gurgling in right iliac fossa; spleen enlarged and tender; tongue dry, red and hard, with fissures; low delirium at times. The accompanying temperature chart completes the history, but the record for the first five days is not correct,

as it was found afterward that he had nocturnal chills and exhibited much prostration in the mornings. A physician in consultation insisted on its being typhoid. The blood analysis appears on the fever chart; he had the malarial leucocyte count, estivo-autumnal parasites, crescents, no Widal reaction. The treatment was antimalarial, salines for the dysentery. He was discharged cured at the end of four weeks. His paroxysms being nocturnal, they had been overlooked and the accompanying dysentery helped to produce the typhoid symptoms. Heroic quininization changed the picture.

The temperature chart and blood examination saved this case from being classed as typhoid fever, and death would have been the result.

CASE 4.—(Record taken from the Reports of the Marine Hospital at Memphis.) The writer saw the patient several times and assisted at the autopsy:

J. F., colored; native of Louisiana; admitted to the United States Marine Hospital at Memphis Dec. 26, 1896, and died Jan. 3, 1897.

History.—Patient was a well-developed and healthy-looking colored boy. He had been sick for four days with chills and fever. Initial chill came on in the evening and was very severe; had a similar chill every evening up to day of admission. His bowels were very loose from the first. Discharge watery and preceded by pains in the abdomen. Temperature on admission was 40.5 C. Pulse poor; tongue round and flabby, clean and red on edges and moderately furred in center. Neither liver nor spleen noticeably enlarged. Was given tincture digitalis on admission and was ordered quinæ every four hours with bismuth and mixture for diarrhea. His

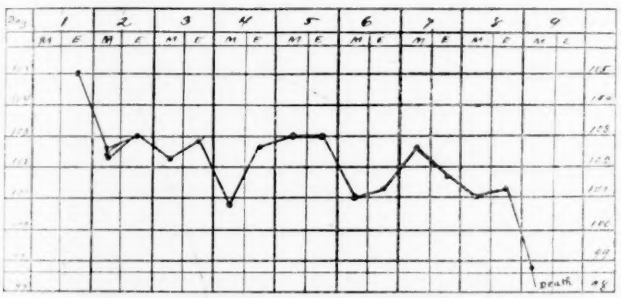

Chart 2, Case 4.—J. F., U. S. M. H., Memphis. Temperature transposed to F. scale. Remittent fever, with diarrhea, perforation and death. Prodromes: Chills daily, 4 days; one on admission; parasites in blood.

temperature on the morning of the 27th was 39 C. and pulse 90; bowels loose but less so than on preceding day. His blood showed a large number of very small extra-corpuscular "rosettes" and some granular bodies. The segmentation in rosettes was not as distinct as usual. On admission the diagnosis of intermittent malarial fever was made to conform to official nomenclature, but the blood examination showed at once that the disease was estivo-autumnal, or, as the nomenclature has it, remittent fever. The possibility of a mixed infection was considered but abandoned. There was an entire absence of tympanites, gurgling and iliac tenderness. The stools were more watery and paler than typhoid stools, but still quite suggestive of typhoid. While the malarial nature of the case was clearly established, still the fever was a hard one to classify as to the kind of malarial fever present. The history from onset to admission pointed to a double tertian or to the variety of estivo-autumnal fever marked by quotidian paroxysms.

The appearance of the rosettes and the temperature curve for the first four days indicated the quartan type of estivo-autumnal fever, while the subsequent temperature curve showed regular tertian remissions. His diarrhea yielded slowly to treatment, declining by the 31st to two passages a day. On the 30th his blood showed both intra- and extra-corpuscular, small hyaline bodies, and a few large and actively motile pigment grains or blocks—two or three to each body. The next day only a few extra-corpuscular pigmented bodies could be found. His mental state from about the third day became rather foggy—a fairly typical typhoid state in fact.

On the 1st of January, the sixth day from admission and the tenth since onset of disease, he had several severe attacks of colic, and these recurred on the 2d. On the night of the 2d his pulse failed rapidly, tympanites developed, and it became evident that he had sustained an intestinal perforation. He died at 10 o'clock on the morning of the 3d, just twelve days from date of first attack.

Necropsy, twenty-four hours after death. Body fairly well nourished. No scars. Calvarium not opened. Lungs normal except for slight congestion. Pericardium contains about 200 c.c. of fluid. Heart rather small, but otherwise normal. Liver, spleen and kidneys normal in appearance and size. Intestines showed general fibrinous adhesions. About 250 c.c. of fluid present in abdomen. The ileum presented a large number of follicular ulcerations. These ulcerations were all opposite to the attachment of the mesentery. Peyer's patches were not at all involved. The mesenteric glands were not enlarged. Two perforations were present—one 4 cm. from the ileocecal valve and the other 12 cm. There were several ulcers, in which the coats were eroded down to the peritoneum. At about 20 cm. above the ileocecal valve there was an area about 2 by 4 cm. where the entire mucous membrane was eroded. Sections taken through the ulcers showed a typical follicular ulcerative process and an entire absence of any of the microscopic appearances of characteristic typhoidal ulcers.

The ulcers were small, funnel-shaped, less than 1 mm. in diameter, with elevated edges; the perforations were about 2 mm. in diameter and closed by fibrinous exudate. Dr. Young and I discussed the Widal test, but this was in its infancy; neither of us had any cultures of typhoid on hand, and Johnston's dried blood method was as yet unknown; typhoid fever is, of course, not scientifically excluded. We both wanted to believe it was typhoid fever; it was between Christmas and New Year, but the blood and postmortem evidences were against such a diagnosis, and it was reported as a case of remittent fever.

III. CONTINUED FEVERS WITH CONSTIPATION, 2 CASES.

During my term of service in the summer of 1899 at St. Joseph's Hospital I had 248 cases of fever, and of this whole number there were only 3 in which there was a question of diagnosis; one of these is reported above. During 1902 I was interested in 2 cases, which follow:

CASE 5.—O. G., aged 19, male, drug clerk; had had intermittent fever a year ago; malaise this time for several days, followed by catarrhal bronchitis. Seen first by Dr. Baldwin (to whom I am indebted for this history) on Oct. 26, 1902. Provisional diagnosis, la grippe; salines and salicylates administered; remission on second day, rise on third; cinchonized for three days. Temperature during first week, morning 100 to 101.5 F., evening 101 to 102, pulse 80 to 85. Dried blood spreads brought to me November 2 showed intracorpuscular estivo-autumnal parasites, about half grown, no crescents; infected cells generally crenated and small. Leucocyte count of 300 cells: small lymphocytes, 9.3 per cent.; large lymphocytes, 30.3 per cent; polymorphonuclear, 58 per cent.; eosinophiles, 1.3 per cent.; basophiles, 1 per cent.; a few microcytes and small nucleated forms, phantom cells and polychromatophiles. No Widal reaction in any dilution. He was thoroughly quininized again without visible change, and after another week malarial infection was still present; no Widal; small lymphocytes, 20; large lymphocytes, 14; polymorphonuclears, 64; eosinophiles and basophiles, each 1 per cent.

Pulse still 85 and good volume, now slightly dicrotic. Temperature runs from 100 to 103 without change in pulse. This time he was given 90 grains quinin hydrobromate in 24 hours; it seemed to have the effect of running up the fever, for he had 102 in the morning and 104 in the afternoon following, and for four hours there was intestinal hemorrhage, at first slightly clotted, then fluid and carmine red; there were no piles. Cold sponging was followed by a fall in fever

and profuse diaphoresis. The fever now gradually declined, reaching normal on the 32d day of the disease.

There was marked tendency to constipation throughout, combated by salines, and when these were suspended some tympanites would develop. Nose bleed once in the first week; a few petechiæ present once, but rather persistent; subsultus once, early; mental hebetude at times. Entire course mild and marked by very slow pulse. Widal reaction constantly absent.

CASE 6.—This patient took to his bed June 14, 1902, and was removed to a private room at St. Joseph's Hospital on the 16th. The previous history was that of malaise for a week, with gradually rising fever. The attending physician found estivo-autumnal organisms and pigmented leucocytes, and gave several intragluteal injections of quinin bimuriate with urea, 0.5 gram each in 10 c.c. of water at six-hour intervals. There was albuminuria with casts and gradually aggravating oliguria during the first week. Renal and frontal pains were constant and troublesome symptoms. There was obstinate constipation and intestinal paresis throughout. The patient could not bear cold to the surface, even icebags produced local neuralgia, and the temperature was reduced with thermol when it got near 104; for this reason the fever chart has no value.

At the end of the first week in bed, no blood evidences of malaria being present and fever still persisting, several trials with the Widal test were made, but without result. The diagnosis of paratyphoid was suggested by one consultant, but no cultures were obtainable. The fever definitely subsided at the end of three weeks without further resort to quinin.

This patient was seen by three very competent practitioners with all the resources of modern medicine at their command, yet one positively asserts that it was a case of malarial fever and proves it by his slides; the second is equally as certain that it was typhoid fever, despite the failure of the Widal test, and the third, who is our honored secretary, modestly suggested that it was paratyphoid. The writer's own opinion is not worth much, since he was the patient. A very complete history was taken, but it throws no light on the case.

During the summer of 1900, 26 cases with history of acute malarial fever were admitted to my service at St. Joseph's Hospital, none of which received any antiperiodic treatment after admission. The blood was examined in 11 without showing infection. They were held to await further recrudescence of the paroxysms, but the fever gradually subsided. They were booked as postmalarial malaise. Here is the history of one:

CASE 7.—L. F., female, aged 24, white, married. Lived in St. Francis bottom; admitted June 10, 1900, with history of tertian chills. Temperature on afternoon of day of admission 102 F., pulse 110 and small. Liver and spleen enlarged. Blood analysis next morning: reds, 3,640,100; hemoglobin, 70 per cent., indicating reduced color index; whites, 6,470, differential count of 200 (eosin and methylene blue). Small mononuclears 10.5 per cent.; large mononuclears and basophiles, 28.5 per cent.; neutrophiles, 54 per cent.; eosinophiles, 8 per cent. No malarial organisms; some leucocytes pigmented.

Blood count five days later showed 3,981,000 reds; hemoglobin, 80 per cent.; whites, 10,180, 70 per cent. of which were neutrophiles; eosinophiles and small lymphocytes gaining. Discharged on June 20 feeling quite well.

The following is a case of typhoid fever with irregular temperature curve:

CASE 8.—W. J. R., aged 21, male, white, clerk. After a two-day malaise he went to bed on July 20, 1901, with a chill, followed by high fever and going off in a sweat. The first temperature reading, taken at this stage, was 104 F. Blood examinations on fever chart; malarial count, leucocytosis, no plasmodia. Next day he had another chill, followed by rise of temperature to 105.2; no plasmodia; no local symptoms to account for chills, pus suspected; bowels constipated and paretic; enema and salines given. Fever then assumed a remittent type and leucocytes diminished; relative increase in small lymphocytes. Widal reaction positive on first and only trial, on sixth day. The case now ran typically typhoid until in the third week there was another chill with leucocytosis; no plasmodia; no quinin given. From now on fever gradually subsided and he made an uneventful recovery. A year later he developed a suppurative appendicitis and was successfully operated on. I am now quite sure that this is what complicated his typhoid fever. I should add that no adhesions were found at the operation. The accompanying temperature chart completes the history.

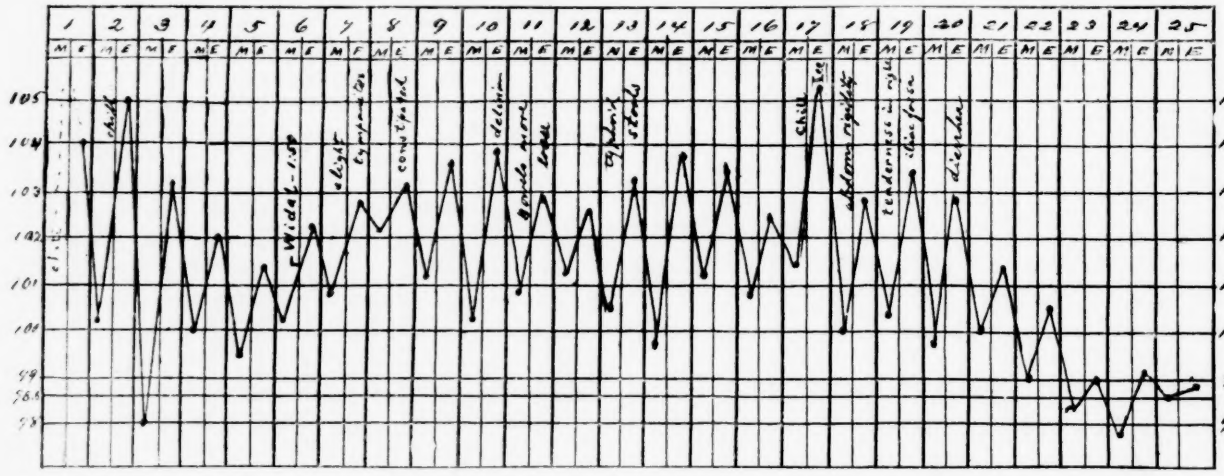

Chart 3, Case 8.—W. J. R. Typhoid fever, with chills. Blood, first day: No plasmodia; no pigmented leukocytes; white cells, 12,020, stained eosin and m. blue; small lymphos., 22, or 11 per cent.; large lymphos. and basophiles, 46, or 23 per cent.; polys., 130, or 65 per cent.; eosinophiles, 2, or 1 per cent. Sixth day: No plasmodia; Widal in 1:50—30 min.; small lymphos., 18 per cent.; large lymphos., 15 per cent.; polys., 67 per cent.; eosinophiles, 0 per cent.; total leukocytes, 9,340. Seventeenth day: No plasmodia; white cells, 16,310; 77 per cent. polys. This case presents a leukocyte proportion resembling that of malaria, except as to polymorphonuclear cells.

Without a blood examination this would have been regarded as a case of malarial fever with intercurrent typhoid.

Now, in conclusion, a few words as to our methods of diagnosis. The Widal reaction is open to fallacies. Even if the culture is just right and the drop contains no fibrin, we have errors estimated at from 3 to 12 per cent. either way. Frequently a single test is all that can be made and the reaction, if transient, may escape us. We also know that it may persist from a former attack and which was perhaps not recognized.

on the other hand, to what do we refer the Widal test as standard? When can we say that it has failed? The blood culture test only appears in about 70 per cent. or less of apparent typhoids. If we have a patient with no symptom but fever, but whose blood gives a Widal reaction, we say he has typhoid fever, yet we have such cases that do not react to typhoid culture and are undoubtedly cases of thermic fever. Yet when we have a case with typhoid symptoms and no Widal we say that the test has failed. In the first instance we reject the negative clinical evidence and in the second we reject the negative laboratory evidence; we do not question the reliability of the Widal test in the one, but we do in the other.

As regards malarial infection, we are by no means a unit as to the diagnostic value of a few infected red corpuscles. We certainly do have latent "malaria," though, perhaps, never without symptoms, and any intercurrent disease may drive the parasites into the peripheral circulation; we attribute the fever to the parasites and cinchonize, sometimes with effect on the fever, sometimes without. The result is conflicting opinion as to the value of quinin in malarial fevers. The so-called malarial leucocyte count is not always characteristic; I have found it repeatedly in fevers giving the Widal reaction when there were no plasmodia. If we make a spread by drawing one slide lengthwise of another and count only within the leucocyte fringe we find relatively less small lymphocytes, because these are left behind with the red cells.

SUMMARY.

We might summarize our paper, then, as follows:

1. A very sudden hyperpyrexia in midsummer is more apt to be sunstroke than "congestion." Do not give quinin without cause.
2. The malarial leucocyte count is only collateral evidence of malarial infection, and the count must include all the cells in the spread.
3. The Widal test may lead us into error in a small percentage of cases; the blood culture test is more difficult and has no negative value.
4. A chill or fulminant onset of a typhoid fever is not sufficient evidence of a complicating malaria.
5. A chill or sudden disturbance of the temperature curve during convalescence in typhoid fever is not necessarily malarial.
6. In a malarial infection the persistence of an irregular subcontinuous fever after thorough cinchonization is not evidence of a typhoid complication or of remaining plasmodia.
7. A positive diagnosis of summer-fall fevers is not always possible.
8. In the hygienic management of summer-fall fevers we should presuppose a double infection, irrespective of symptoms.
9. Some of the summer-fall fevers are typhoid, some are malarial and a few of them are neither one, but the writer is opposed to the belief in an X fever.

The Great Charite Hospital at Berlin.—Besides the 147 physicians connected with this hospital there are 603 other officials or attendants. There are 1493 beds and 68 infant cribs. The number of patients treated last year was 19,121; the average stay in the hospitals 28.8 days; the expense per day and capita 3.36 marks or about $0.84. The house staff numbers 519. The *Allg. Med. Ct. Ztg.* for April 26 gives other details of the establishment which consumed last year nearly half a million eggs, 44,478 liters milk, 30,602 herrings and 36,856 kilograms butter, etc.

A CLINICAL OBSERVATION OF NINETY CASES OF TYPHOID FEVER.

WITH FOUR DEATHS, WITH SPECIAL REFERENCE TO THERAPEUTIC FASTING.*

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While a statistical study of typhoid fever is not in strict accordance with the caption of this article, there is a valuable amount of information as to the etiology of the disease furnished by the vital statistics of the Twelfth Census Reports and, for a practical observation, a few facts may be referred to without impropriety.

The geographical distribution of typhoid fever shows a greater prevalence in the southern states, including the Carolinas, Georgia, Alabama, Mississippi and Tennessee, the death rate being 76.1 per 1,000 deaths. Next highest mortality is 69.5 for Louisiana, Missouri, Arkansas, Indian Territory and Texas. Of the latter 80.6 is rural and 38.7 is cities. The general rate for rural is 48 and cities 19, which suggests a greater source of infection in the rural districts. Nearly every source of the infection can be excluded except the drinking water, which is contaminated by the soil. My own observation of the cases herein reported warrants that belief, as 79 cases drank well water and 11 cases drank hydrant water, and the greater proportion of the population in the locality where this observation was made is dependent on hydrant water for drinking purposes.

TABLE 1.

	Population.	Deaths, All Causes.	Typhoid Deaths.	Tuberculosis Deaths.	Typhoid Deaths per 1000 Deaths.	Tuberculosis per 1000 Deaths.	Typhoid Deaths per 100,000 Pop	Tuberculosis per 100,000 Pop.	Death Rate.
United States..	75,994,575	1,039,094	35,379	109 750	34	106	33	190	
White.. . . .	66,809,188	892,092	28,848	87,673	32	98	43	131	13
Colored... . .	9,185,387	147,002	6,531	22,077	44	150	71	251	16
Georgia... . .	2,226,331	26,941	1,585	2,651	58	99	71	120	12.4
White.. . . .	1,181,294	13,094	942	981	71	74	79	83	11
Colored... . .	1,035,037	13,847	643	1,67f	46	126	62	161	13
Atlanta.. . . .	89,872	2,387	98	309	40	125	108	342	26 6
White.. . . .	54.090	1,250	53	119	42	95	97	220	23
Colored... . .	35 782	1,137	45	181	39	159	125	505	31
New York State	7,268,894	130,268	1,776	14,306	13	109	24	196	. .
New York City.	3,437,202	70,229	594	8,482	8	120	17	246	. .
Massachusetts.	2,805,346	49,756	625	5,370	12	107	22	120	. .

It will be observed in Table 1 that the general death rate per 1,000 deaths from typhoid fever is 34. In Georgia the rate is 58, while New York has 13 and Massachusetts has a rate of 12. Atlanta, Ga., has a rate of 40, while New York City has 8.

As will be observed, the death rate in Georgia is less for the colored race, being 46, while that of the white is 71. The disease is evidently less frequent and less fatal in the colored race. This disease, excepting tuberculosis and pneumonia, claims more victims than any other disease in the south and, excluding the infant mortality of pneumonia, it is second in causing more deaths in adult life. According to death rates given by the census report in the rural districts of Georgia, there were 1,325 deaths from typhoid fever, while tuberculosis claimed 1,668.

A greater number of deaths from typhoid fever occur in the months of August, September and October and there is a more frequent occurrence after a season of heavy rainfall. It is pre-eminently a disease of early

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

adult life, and the average age at death of all cases in the United States is 28.8 years. Typhoid fever shows a marked predilection for occupations. As will be observed in Table 2, farmers have the highest death rate, 58 per 1,000 deaths, excepting teachers, which is 98. Nurses have a rate of 56, miners 43, clergymen 37, and physicians and lawyers 23. It will be observed that physicians, although in contact with the disease, do not often become infected and nurses are not more often infected than other classes. There are more people ill with typhoid fever during the year than any other disease, especially farmers. Estimating the mortality of typhoid at 15 per cent., tuberculosis 75 per cent. and pneumonia 20 per cent., there were farmers ill from typhoid fever 37,710, from tuberculosis 14,735, and from pneumonia 55,003. The same observation is noted for other occupations.

The death rate per 100,000 population for various occupations is as follows: Farmers, 32; miners, 38; physicians, 33; clergymen, 46; lawyers, 31, and nurses, 47.

These facts may be summarized as follows:

The death rate from typhoid fever in the south is startling and claims about an equal number of deaths among the whites as tuberculosis, and well water is probably the source of infection.

There are more adults ill from typhoid fever during the year than any other disease in Georgia.

TABLE 2.

	Deaths, All Causes.	Typhoid Deaths, per 1000 Deaths.	Tuberculosis Deaths, per 1000 Deaths.	Pneumonia Deaths, per 1000 Deaths.	Typhoid Cases, 15 per cent.	Tuberculosis Cases, 75 per ct.	Pneumonia Cases, 20 per cent.	Registration Area.		
								Typhoid Deaths per 100,000.	Tuberculosis Deaths per 100,000	Pneumonia Deaths per 100,000.
Farmers. .	96,502	58	106	114	37,710	14,735	55,003	32	147	140
Miners. . .	5,895	43	97	127	1,709	820	30,000	38	120	77
Physicians	2,322	23	93	87	347	306	1,011	33	168	178
Clergymen	2,062	37	98	95	503	291	980	46	123	255
Lawyers .	1,508	23	107	72	233	213	541	31	139	132
Teachers .	1,256	98	208	95	820	381	600	. .	182	144
Nurses . .	582	56	103	91	220	90	212	47	100	93

Farmers, next to teachers, have the highest death rate.

The average age at death is 28.8 years.

Most writers agree that typhoid fever is a water borne disease. The *New York Medical Record,* in an editorial, says: "While agreeing with a majority of investigators, we believe that water is the chief agent in the causation and dissemination of typhoid fever, and we admit that it may be air borne, being transmited by dust, flies," etc. Dr. Leigh Canney in a recent book regards the question of etiology as a question of pure or impure drinking water. Flies among the poor furnish a means of conveyance of infection, as the writer has often observed cases imported in families in small houses, and the disease spreads to other members of the family.

In this report of cases only clinical diagnoses were made and the suggestion of Professor Osler was adopted, viz., any fever continuing beyond ten days and resisting the influence of quinin may be assumed to be typhoid.

I regret not having a Widal test of these cases to report, but, after all, the clinical diagnoses may be quite as reliable, as only 70 per cent. give a Widal reaction before the end of the first week, according to the New York health department. All the discussions and controversies prove that no routine drug treatment of typhoid fever has any specific value. Of course symptoms should be controlled by appropriate remedies.

Turpentine was the only routine drug used in these cases, and it certainly relieves the intestinal symptoms better than any remedy at our disposal. It has been used longer and more widely than any other remedy, and its popularity still maintains with clinical observers of long experience.

Dr. Baird, at a meeting of the Georgia Medical Association, 1902, gave a résumé of the treatment of typhoid fever by 24 authorities and may be summarized in a few words: rest, diet, cold bath, etc. My own experience convinces me that the above summary represents the facts of the question, and it behooves us to study more closely the details of the rest, diet and bath treatment and our results would give us a greater percentage of recoveries.

As seems to the writer the dietetic treatment is the most important of all and no drug can counterbalance the baneful effect of dietetic sins. Fasting as a therapeutic measure has proved so valuable to me in the treatment of these cases that I account for the low rate of mortality by no other part of the treatment. The pathologic anatomy of typhoid fever shows a condition of gastrointestinal catarrh with hyperplasia, with a great reduction of all the digestive fluids. Saliva is diminished and hydrochloric acid is usually absent in the gastric juice and, in fact, almost every condition unfavorable to digestion exists. Diarrhea is an effort of Nature to throw off what the intestines can not digest. Intestinal ulcers should be assumed to exist in every case, however mild, and the proper treatment of ulcers is rest.

The rational treatment of such a condition is a restricted diet or fasting, then peristalsis can be better controlled by cold application and an opiate may be used if much diarrhea exists.

The eliminative treatment, so called, is irrational and would be unnecessary if there was no surplus of food in the intestines to dispose of.

The active symptoms in the first stage of the disease can be better controlled by fasting for 24 to 48 hours or even longer, than by any other remedy and the effect of any other remedies applied will be greatly enhanced. The effect of the cold bath is much more marked. I have often noticed that the temperature can be reduced 2.5 degrees by a simple sponge bath. Many patients exhibit marked peculiarities as to the effects of cold applications, most cases having an agreeable effect during a high temperature, while in others having an exciting effect. The Brand system being more or less impracticable, recourse is had to the modified cold bath or even a hot bath. Each case should be studied on its own merits and the cold, warm or hot sponging applied accordingly. In fact, some observers have claimed better results from the hot bath. The patient's comfort should not be lost sight of in the bath treatment. It has been my observation that cold is better for some, while warm sponging is better for others, and still in other cases cold and hot sponging alternating has been better. In sthenic cases, with very high temperature causing delirium, ice-cold applications are preferable and in later stages, where the temperature is not excessive but delirium exists, warm sponging has a more soothing effect. In asthenic cases, with hyperpyrexia, the cold and warm alternating seem to act better. Rubbing enhances the effect of these applications and heat is thereby dissipated. It has been stated that 30 per cent. of the entire quantity of blood in circulation remains in the cutaneous system and the intimate relations between the physiologic function of the skin and temperature variations of the body both throw light on the

importance of sponging in typhoid fever. An excess of food in the intestines increases peristalsis and favors the absorption of toxins. The writer has observed an danger from inanition is slight. A recent writer[1] observes "that emaciation seemed to be independent of the amount of food taken into the stomach," and the same

TABLE 3.

	Cases.	Color.	Age.	Sex.	Grade.	Gastrointestinal Symptoms.	Nervous Symptoms.	Drinking Water.	Month.	Duration.	Remarks.
1	S. E.	W.	30	M.	Severe.	Marked.	Absent	Well.	September	21	
2	G. B. K.	"	60	F.	Mild.	Absent	"	"	"	12	
3	L. A.	"	18	"	Severe.	Marked.	"	"	June.	21	
4	L. A.	"	17	"	"	Absent	"	"	August	24	
5	J. A.	"	8	"	Mild.	"	"	"	"	14	
6	A. C.	"	8	M.	Severe.	Marked.	Marked.	"	September	14	
7	J. C.	"	6	"	Mild.	Absent	Absent	"	"	12	
8	L. C.	"	4	F.	"	"	"	"	"	12	
9	M. D.	"	50	"	"	"	"	"	July.	20	
10	J. G.	"	20	M.	Severe.	Marked.	Marked.	"	October.	21	
11	A. G.	"	15	F.	"	"	Absent	"	"	14.28	Relapsed on eighth day from taking solid food.
12	B. G.	"	10	M.	Mild.	Absent	"	"	August.	12	
13	C. G.	"	8	"	"	"	"	"	"	12	
14	W. H.	"	22	"	Severe.	Marked.	Marked.	"	October.	28	Had one attack two months previous.
15	W. H.	"	23	"	Mild.	Absent	Absent	"	August.	18	
16	J. L.	"	30	"	"	"	"	"	July.	16	
17	A. M.	"	40	"	"	"	"	"	September	14	
18	C. P.	"	12	F.	"	"	"	"	April.	14	
19	J. B.	"	18	M.	Severe.	Marked	Marked.	"	August.	18	
20	C. B.	"	16	"	"	"	"	"	"	16	
21	L. B.	"	12	F.	"	"	Absent	"	September	14	
22	C. L. B.	"	48	"	Mild.	Absent	"	"	"	14	
23	O. D.	"	20	M.	"	"	"	"	November.	12	
24	C. S.	"	17	"	Severe.	Marked.	Marked.	"	September	45	Double parotid suppurat'n osteitis of hip and humeri.
25	J. D. T.	"	47	F.	Mild.	Absent	Absent	"	July.	28	
26	M. W.	"	17	"	Severe.	Marked.	"	"	"	21	
27	J. V. E.	"	37	M.	"	"	"	"	August.	20	
28	W. E.	"	48	F.	"	"	"	"	"	20	Had small hemorrhage.
29	S. G.	"	18	"	"	"	"	"	September	18	
30	J. B. H.	"	22	M.	Mild.	Absent	"	"	August.	14	
31	A. H.	"	24	"	Severe.	Marked.	"	"	"	12.28	Relapsed eighth day from taking solid food and getting up.
32	F. A. J.	"	25	F.	Mild.	Absent	"	"	"	12	
33	W. M.	"	35	M.	Severe.	Marked.	Marked.	Hydrant.	November.	20	
34	M. M.	"	18	F.	"	"	"	Well.	September	28	
35	M. M.	"	28	M.	Mild.	Absent	Absent	"	July.	12	
36	J. S.	"	20	"	"	Marked.	"	"	June.	14	
37	D. T.	"	25	"	"	Absent	"	Hydrant.	August.	14	
38	T. W.	"	30	"	Severe.	Marked.	Marked.	Well.	April.	21.70	Pneumonia and dysentery in convalescence.
39	W. E.	"	29	"	Mild.	Absent	Absent	"	July.	14	
40	S. E.	"	12	"	"	"	"	"	"	14	
41	A. B. A.	"	23	F.	"	"	"	Hydrant.	June.	14	
42	B. H.	"	32	M.	Severe.	Marked.	Marked.	Well.	August.	20	
43	A. M.	"	12	F.	"	"	"	"	"	28	Dysentery in convalescence.
44	G. M.	"	8	"	Mild.	Absent	Absent	"	"	14	
45	C. H.	B.	6	"	"	"	"	"	"	12	
46	N. J.	"	25	M.	"	"	"	"	"	14	Relapsed and died from urinary retention and neglect.
47	L. C.	W.	21	F.	"	"	"	"	September	12	
48	S. C.	"	19	"	Severe.	Marked.	"	"	October.	21	
49	N. C.	"	13	"	Mild.	Absent	"	"	September	12	
50	F. L.	"	10	M.	"	"	"	"	"	20	
51	L. M.	"	45	"	"	Marked.	"	Hydrant.	"	14.21	Relapsed on eighth day from taking solid food.
52	C. B.	"	6	"	"	Absent	"	Well.	August.	14	
53	C. B.	"	4	"	"	"	"	"	"	10	
54	W. C.	"	30	F.	"	"	"	"	July.	14	
55	R. G.	"	21	M.	"	"	"	Hydrant.	October.	14	
56	J. G.	"	27	F.	"	"	"	"	October.	21	Five mo. pregnant and two mo. tedious convalescence.
57	J. P.	"	17	"	Severe.	Marked.	Marked.	Well.	"	9	Died ninth day from hemorrhage and getting up in delirium.
58	C. C.	"	7	"	Mild.	Absent	Absent	"	"	10	
59	C. C.	"	4	M.	"	"	"	"	November.	10	
60	G. D.	"	10	"	"	"	"	"	August.	14	
61	P. M.	"	10	F.	Severe.	Marked.	Marked.	"	July.	28	Protracted convalescence.
62	M. A.	"	35	"	"	"	Absent	Hydrant.	"	28	
63	J. W. R.	"	32	"	"	"	"	Well.	"	28	Complicated the puerperium, tedious convalesence.
64	J. M. V.	"	8	M.	"	"	Marked.	"	"	21	
65	A. D.	"	15	F.	Mild.	Absent	Absent	"	August.	14	
66	E. D.	"	13	"	"	"	"	"	"	12	
67	M. R.	"	35	"	"	"	"	"	"	21	
68	W. W.	"	10	M.	"	"	"	"	July.	12	
69	D. W. S.	"	40	F.	"	"	"	Hydrant.	"	14	
70	C. M.	"	17	M.	"	"	"	Spring.	"	21	Solid food on tenth day; relapse, with pneumonia and death in one week.
71	R. B.	"	4	"	"	"	"	Well.	"	10	
72	G. J.	"	17	F.	Severe.	Marked.	"	Spring.	"	28	
73	F. B.	"	35	M.	"	"	"	Well.	August.	18	
74	V. F.	B.	50	"	"	"	Marked.	"	"	12	Adynamic and alcoholic and death on twelfth day
75	E. C.	W.	23	"	Mild.	Absent	Absent	"	September	12	
76	F. S. B.	"	36	"	"	"	"	"	"	22	Second attack, slight hemorrhage in convalescence from milk and lime water.
77	M. L.	"	25	"	Severe.	Marked.	Marked.	"	"	36	Hematuria.
78	S. S.	"	12	F.	Mild.	Absent	Absent	"	October.	14	
79	A. L.	"	14	"	"	"	"	"	"	18	
80	W. P.	"	20	M.	"	"	"	"	November.	23	
81	P. G.	"	18	F.	"	"	"	Hydrant.	"	20	
82	L. C.	"	6	"	"	Marked.	Marked.	"	October.	14	Operated on for appendicitis fourth day.
83	C. C.	"	3	"	"	"	Absent	Well.	August.	12	
84	H. C.	"	2	M.	"	Absent	"	"	September	12	Occurred with three other cases in same family.
85	A. J.	"	8	F.	"	"	"	"	"	21	
86	H. C.	"	5	M.	"	"	"	"	"	21	
87	S. M.	"	28	F.	"	"	"	"	October.	10	Abortive.
88	E. H.	"	5	M.	Severe.	Marked.	Marked.	Hydrant.	"	14	
89	H. R.	"	6	"	Mild.	Absent	Absent	Well.	"	22	
90	M. M.	"	18	"	Severe.	Marked.	Marked.	"	"	14	Relapsed, supposedly from taking buttermilk.

increase of several degrees of temperature in a quiescent case by taking a dose of castor oil.

It is a clinical fact that emaciation is less from typhoid fever than any other acute disease, and the observation has often been made by myself, which would show that nutrition is not dependent on the amount of food taken into the stomach. Many cases run an

1. Lewis Med. Rec., vol lxii, No. 5.

abortive course after the amphibolic stage under a treatment of fasting and a restricted diet. After fasting 24 to 48 hours a very restricted diet should be given, consisting of broths of beef, chicken, mutton, oysters, etc., coffee, cocoa, egg albumin, peptonoids, etc., in prescribed amounts.

Gelatin is a valuable adjuvant in the dietary of a typhoid patient. It serves three purposes: adds to the relish of the various liquids, lessens the nitrogenous waste from the system and prevents hemorrhage. A teaspoonful three or four times a day is the amount usually ordered and should be dissolved in a little hot water and then added to any liquid nourishment, meat broths, cocoa, coffee, tea, etc. It adds a richness of taste to these slops, which otherwise become tiresome to the patient. The food value of gelatin is recognized and, being in a concentrated form, serves an excellent purpose. When used, emaciation is less rapid. The hemostatic effect of gelatin is universally conceded, but to wait until an intestinal hemorrhage has occurred but little immediate good can be hoped for by its use. It should be used as a routine in all cases to prevent hemorrhage. Very aggravated diarrheic cases do not tolerate it so well, as it may increase tympany. But in these cases it may be used on alternate days in small quantities. Since beginning its use no hemorrhage has occurred. The case should be closely studied, and any excess of food will be indicated by a rise of temperature. To nourish the patient by a minimum amount of food requires a very close study. Milk should be absolutely forbidden, because no one can predict when it will form a curd, which is worse than any solid food. One of my patients had a hemorrhage in convalescence from taking milk and lime water, equal parts. I examined curds the size of a hazelnut in the bloody dejecta. The case was a mild one. It is valuable, however, diluted with two to five parts of coffee, cocoa, broths, hot water, as under these circumstances the danger of curd formation is light.

This plan of dietetic treatment should be continued until active symptoms are controlled and, as improvement advances, nourishment may be more liberally given. Solid food is a danger that offers few advantages to the patient. Nearly all recrudescences are due to dietetic errors. Fasting in late stages and convalescent stages will cause fever, as inanition often causes fever.

Below is a summary of the table of reported cases: Of the cases 87 were white and 3 colored. The youngest was 2, and occurred with 4 others in the same family, and the oldest was 60. Cases under 10 were 20; between 10 and 20, 29 cases; between 20 and 30, 20 cases; over 30, 21 cases. The average age was 19.4. There were 48 males and 42 females. As to the months of occurrence, August claimed 27; September, 21; July, 16; October, 15; November, 5; June, 4, and April, 2. Those classed mild were 58 and those severe 32. Gastrointestinal symptoms were marked in 36 and absent in 54. Nervous symptoms were marked in 18 and absent in 72. The average duration was 19 days, and the same without relapes was 17 days. Five, or 5 5/10 per cent., of the cases relapsed, and all recovered. The relapses were ascribed to taking too early of solid food. Five cases were complicated. Three, or 3.3 per cent., had hemorrhage, two of which were slight and the third immediately fatal from getting up in delirium.

One case (No. 88) was diagnosed appendicitis and on the fourth day an apparently normal appendix was removed and the case pursued a typical course of the disease to recovery.

Case 72 had hematuria and recovered.

Case 24 had double parotid suppuration and osteitis of the humeri, and after forty-five days recovered.

Case 14 had an attack two months previous.

Of the four deaths (4.4 per cent.) Case 46, a negro, can, with propriety, be ruled out, as he was dismissed and I was called to see him in a relapse, in a dying condition, having had urinary retention twenty-four hours.

Case 57 would probably have recovered, but, being without a nurse, she got up in delirium and a fatal hemorrhage resulted.

Case 70 contracted pneumonia on the tenth day of convalescence and died a week later. It was the opinion of my colleague that there was no reinfection of typhoid fever.

Case 64, a negro, alcoholic, died on the twelfth day from asthenia.

Of 87 whites treated there occurred 2 deaths, or 2.2 per cent.

The conclusions to be adduced are as follows:

1. Fasting and a restricted diet are indicated because of pathologic conditions.
2. A clinical fact maintains that emaciation occurs independently of the amount of food taken.
3. All severe cases should be subjected to fasting for 24 to 48 hours to relieve the active symptoms, which exhaust the patient more rapidly than the lack of food.
4. After a fast should be prescribed a restricted diet of broths, diluted milk, etc., in definite quantities.
5. Gelatin prevents too rapid emaciation in certain cases and renders hemorrhage less liable.
6. The cold bath or the modified cold bath is more effective during a fast.
7. Peristalsis favors the absorption of toxins and cathartics should be used only to remove undigested food.
8. The presence of intestinal ulcers should be assumed to exist in every case and the proper treatment is rest, which is better attained by fasting and a restricted diet, thus preventing hemorrhage and perforation.
9. The presence of diarrhea and vomiting indicates the adoption of the fasting treatment.
10. Fasting and a restricted diet shorten the course of the disease and many cases run an abortive course after the amphibolic period.
11. Many of the vaunted cures from specific drugs are dietetic in fact.
12. Recrudescences are nearly always due to dietetic errors.
13. In the above report, 45 consecutive cases occurred without death. Of 87 whites, 2, or 2.2 per cent., died. Of colored, 2 died, and the low mortality of 4.4 per cent. of all cases was ascribed to the above treatment.

TYPHOID FEVER IN COLORADO.

A REPORT OF FIVE HUNDRED AND TWENTY-NINE CASES.*

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DENVER.

We report to-day our conclusions regarding a series of cases of typhoid fever at an altitude of about 5,000 feet, in order to compare the disease as we see it with typhoid fever in general.

There occurred 225 cases in the private practice of Dr. Hall in Colorado, 54 of these being seen in consultation;

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529 cases, most thoroughly recorded and analyzed by Dr. Claude E. Cooper, Denver, late house physician at the Arapahoe County Hospital, occurred in the wards of that institution between 1896 and 1902. We include only 12 of the cases seen by Dr. Hall in his service at St. Anthony's Hospital, the records of cases at this institution for several years being too incomplete for inclusion. He did not personally see all of the cases reported from the Arapahoe County Hospital, and he here tenders his thanks to his colleagues for permission to use the hospital records.

The males and females were almost equally distributed in the private cases, the numbers being 116 and 109 respectively. In the hospital cases males predominated, 241 to 63.

The total deaths were 77, a percentage of 14.5 per cent. The male rate was 14 per cent., the female, 15.6 per cent. That for private practice, 14.2 per cent., is unduly high, owing to the fact that nearly a fourth of them were seen with other physicians, and were naturally grave cases. Of the 171 cases cared for by Dr. Hall in private practice 16 died, or 9.3 per cent. It is well recognized that the mortality in family practice is generally less than in the hospital, owing to many favoring conditions.

The exact cause of death can not be given in every case, since possibly pneumonia, hemorrhage and heart disease occur in the same patient. As nearly as they can be stated, however, the causes were as follows: Intestinal hemorrhage, 15; general hemorrhage, 3; hemorrhage from face (noma), 1; abortion and uterine hemorrhage, 1; perforation without hemorrhage, 7; perforation with hemorrhage, 7; pneumonia, 14; convulsions, 2; edema of larynx, 1; nephritis, 1; organic heart disease, 2; accidental poisoning by irregular practitioner, 1; heart failure (in three cases after the subsidence of the fever), 7; general toxemia and exhaustion, 15.

Arranged by age, the distribution of the cases is as follows:

8 months of age	1	31 to 40 years	108
2 years of age	1	41 to 50 years	25
3 years of age	5	51 to 60 years	8
4 years of age	2	61 to 70 years	3
5 years of age	9	Age not given	5
6 to 10 years	20		
11 to 20 years	128	Total	529
21 to 30 years	214		

The great preponderance of cases in adolescents and young adults is very noticeable, over 85 per cent. occurring between 11 and 40 years of age. The deaths were distributed as follows:

Under 5 years	0 or 0 per cent.
Between 6 and 10	2 or 10 per cent.
Between 11 and 20	15 or 11.7 per cent.
Between 21 and 30	28 or 13 per cent.
Between 31 and 40	18 or 16.6 per cent.
Between 41 and 50	10 or 40 per cent.
Between 51 and 60	1 or 12.5 per cent.
Between 61 and 70	1 or 33.3 per cent.

In two fatal cases the age is not given. Thirteen of the cases had had a previous attack of the disease, and two have had subsequent attacks, one being reported to us as fatal twenty months after the attack recorded here.

Relapse occurred in twenty-three cases, according to the records. We are practically sure that this percentage, 4.3, is rather too low, for the charts are not all complete. But three of these were fatal, one patient recovering after two relapses, and a total febrile course of four months.

As to symptoms present the records are not complete, and only positive or negative statements are here given.

Rose spots are noted in 270 cases.

Enlarged spleen in 155 cases.

Distended abdomen in 168 cases.

Diarrhea in 119 cases.

Constipation in 77 cases.

Unusually high temperature in 34 cases.

Medium temperature in 196 cases.

Moderate temperature in 103 cases.

Three cases are noted as having temperature over 106, and all died.

Many of these cases were seen before the introduction of the Widal test. It is recorded as positive in fifty instances, but negative findings are not noted. No cases of paratyphoid fever were recognized.

Delirium worthy of record is noted in fifty-eight cases, of which twenty-two died. It does not appear to be an especially dangerous symptom. Distinct chills are noted in fifty-three cases, and chilly feelings in thirty-one. In four of those in whom repeated chills occurred during the course of the disease phlebitis was noted, while two cases with severe paroxysms had none. In one woman the chills were erroneously thought to be septic at first, owing to a recent miscarriage. Phlebitis is noted in twenty cases, but in some of the hospital cases the records are certainly at fault, for Dr. Hall has had as many as five cases on hand at one time in the county hospital. We think this number should certainly be doubled. It is apparently more frequent in the cases that are treated by tubbing. Phlebitis is certainly much more common here than the statistics commonly given would lead one to expect. In January, 1899, Dr. Hall had a patient in St. Luke's Hospital with this complication, and every patient admitted during the previous fall had suffered similarly, probably eight or ten cases in all. But three patients with this complication died. Two cases with double phlebitis recovered. In one case the trouble extended to the veins of the left hip and loin.

Lobar pneumonia occurred in twenty-three cases, fourteen of these dying. No exact record was kept of other pulmonary complications. Hemoptysis occurred in five cases, one of these only being tuberculous. In one case lobar pneumonia was present, in one abscess of lung, while in two the bleeding was unexplained. Two of the cases died, the one with pneumonia and one uncomplicated case.

A distribution of rose spots so general as to resemble the eruption of measles was noted in four cases, while in many others they extended to the limbs, though not to the face.

Pregnancy complicated seven cases, while two developed during the lying-in period. One woman was delivered of a healthy child while the temperature was 104, but recovered without complications. One at the beginning of the seventh month of the pregnancy had a severe attack, with three hemorrhages and relapse, but bore a living child at full term. One in the eighth month died of chronic parenchymatous nephritis, the immediate cause being laryngeal edema. She had two hemorrhages from the bowel, and the Widal test was positive. One died of intestinal hemorrhage in the fifth month. Two cases in the fifth month passed safely through the disease, and one aborted early in the pregnancy and died. Of the two cases developing in childbed one recovered.

In eleven cases such nervous manifestations occurred as frequently give rise to the diagnosis of meningitis, and curiously ten of them recovered. In one case Dr. Hall coincided with Dr. C. G. Hickey in a probable diagnosis of tuberculous meningitis, but the woman developed a severe attack of typhoid fever and recovered. One woman screamed for many days with headache when not under the influence of morphin or other drugs, but after many tub baths made a perfect recovery.

Great interest centers about the heart in this fever. Five cases were complicated with valvular disease. A boy of 13, as he recovered from scarlet fever, came down with typhoid. He died of complicating pneumonia at about the fifteenth day. He presented the systolic thrill and harsh murmur, with cyanosis and dyspnea, of congenital pulmonic stenosis. A girl of 5 years with mitral regurgitation following rheumatism passed safely through the disease, as did a girl of 15 with aortic and mitral leakage of very moderate degree following chorea. A girl of 17, not treated by Dr. Hall, but seen once by him in an emergency and not included in these figures, died in the height of the fever of well-marked aortic regurgitation, being mentioned merely to show the danger of prolonged fever even when compensation has been perfect. A man of 23 with well-marked aortic incompetence recovered. One woman with serious mitral disease recovered from the fever, but died of cardiac failure a few weeks later. One woman of 37 with a very mild attack died of sheer cardiac weakness on the seventeenth day, with absolutely no complications. Neither Dr. Hickey nor Dr. Hall could find any possible cause for such an unusual death, excepting a previous starvation diet. The woman had gone mad over some of the pernicious literature recommending a diet of fruits, and had literally lived on such a diet for months before her death. When doing obstetric work Dr. Hall frequently saw women so weak as to require the forceps from this cause, but did not realize the danger of the writings mentioned as regards typhoid fever.

One man and two women died of cardiac weakness after the fever had long disappeared, and a woman of 67 had serious general edema from cardiac failure during her convalescence, but recovered on being sent to her home in a lower altitude. A feeble girl of 8 years died of hemorrhage from a facial artery due to noma.

Two cases with purulent otitis media recovered. One patient with pleurisy with effusion recovered without tapping, and one died, but we have no record of the exact cause. Gangrene of the right leg from popliteal obstruction necessitated amputation in an epileptic of 36 years. Suppuration of the hip joint occurred in a boy of 15, proving fatal, and a man of 22 with suppuration of the left elbow recovered. The epileptic male just mentioned, another male of 20, and a female of 23 recovered from attacks of confusional insanity following the fever. Since these statistics were gathered a girl of 22 in the insane wards of the county hospital recovered from the mania for which she had been committed months before, as she convalesced from an attack of typhoid.

One male of 28 had acute nephritis of great severity after his relapse, but recovered. The woman already mentioned as being pregnant, and an alcoholic man of 36 died with chronic parenchymatous nephritis during the disease. Many patients presented albumin, but we have no accurate record of its occurrence.

Fourteen fatal cases of perforation have been mentioned. One of these, a boy of 17 who entered the hospital twenty-four hours after the accident, was promptly operated on by Dr. Leonard Freeman, but died, as we had reasons to expect he would do. An autopsy proved that a single ulcer existed but a few inches from the cecum. It would have been an ideal case for operation if only seen earlier. A male of 29 years also died after operation, while a man of 23 recovered after operation by Dr. S. D. Van Meter. He died of fecal obstruction less than a year later, from a band of adhesions about the former wound. A man of 26 whom Dr. Hall saw with Dr. T. E. Taylor, recovered from a typhoid perforation, an ischiorectal abscess opening just to the right of the anus, as a result of the walled-in infection. This had not closed nine months later. After careful consideration we feel sure that this was typhoidal, and not appendiceal, although no Widal test was made.

False symptoms of perforation are noted five times. A boy of 17 had screaming pain in the right flank, rigidity and rise of temperature, but no further symptoms and recovered promptly. A man of 25 had similar pain, partial disappearance of liver dulness, a leucocytosis of 13,000, and then a subsidence of all symptoms. A man of 37 had similar symptoms in his second relapse, and recovered, and at autopsy in a similar case a local peritonitis without perforation was found. In a woman of 30, at postmortem examination, we found some blood in the bowel, though no external hemorrhage had occurred, and bubbles of gas under the peritoneal coat of the small intestine, but no actual perforation. She had presented symptoms pointing toward this accident before death, but had no leucocytosis.

The occurrence of petechial eruption in typhoid is rightly regarded as rare, and as usually of fatal import. In five of these cases this phenomenon was seen, three of them dying. A male of 26 had hemorrhages from the mucous membranes as well, and died. A boy of 16, comatose from the start, had petechiæ limited to the chest, dying in the second week. A mulatto male of 21 with many subcutaneous hemorrhages had widely dilated heart and loud mitral murmur. Dr. Hall suspected malignant endocarditis from the sudden cardiac developments, but autopsy showed only severe and typical typhoid lesions. A male of 26 with many hemorrhages under the skin and edema of the feet, and a male of 39, with a moderate fever and petechiæ, recovered. This rare complication is obviously not to be regarded as necessarily fatal.

Five patients are noted as suffering from chronic pulmonary tuberculosis. A male of 28 died with a pleural effusion, as already mentioned. A female of 42 recovered, as did three males of 19, 28, and 27 years respectively, the latter having a pulmonary hemorrhage during the fever.

Two males aged 20 and 42 years respectively passed segments of beef tapeworm, and both recovered. In a male of 33, who recovered, the plasmodium malariæ was found. He had active chills superadded to his febrile temperature.

Several suppurative conditions are of interest. General furunculosis during recovery is noted but once, but it must have occurred oftener. Abscess of the right parotid gland, opening through the ear and afterward opened externally, occurred in a man who recovered. Noma proved fatal in a feeble girl of 8. An abscess in the left groin from bedsore resulted fatally. Two abscesses of the axilla, one of the breast, one of the neck, and one in the erector spinæ muscles near an old bullet wound, are noted, all the patients recovering. The patient who had acute nephritis had abscesses in the bursæ about the left elbow and right wrist, and one in the buttock, but recovered. The typhoid bacillus was not found, but the cocci of suppuration were abundant.

Peripheral neuritis is recorded in three cases, all recovering; once in the left arm, once in the legs and feet, and once limited to the parts supplied by the ulnar nerves. But three cases of the peculiar neuritis described as "tender toes" are noted, but we recall more than that in the county hospital. They were exclusively in patients who were tubbed, all recovering.

We shall mention briefly some of the rarer complications and curiosities of the series. One woman had a wandering left kidney, with severe Dietl's crises. She became pregnant in convalescence, and no further symptoms from the kidney came to notice. One woman with distinct appendicitis developed typhoid during convalescence. In one woman a large external pile sloughed off. One young man died while vomiting. One woman of 41 died with intestinal obstruction during a well-marked attack of typhoid. Impaction of feces in the rectum required manual removal in one woman. Erysipelas complicated one fatal case. In a boy of 16 who recovered the spleen reached to the median line, but the cause, almost certainly not typhoid, is not specified. In a boy of 10 years jaundice with some enlargement of the liver took place, presumably of the catarrhal variety. He recovered. Pericarditis with fatal result occurred in a woman of 34. Gonorrhea in a male patient pursued its normal course. One patient with serious hiccough recovered. In two instances six cases of the fever occurred in one family. One patient, after a severe attack, had acute lobar pneumonia, affecting in succession three separate lobes, and recovered after months of illness. Marked muscular rigidity was noted in one of the fatal cases with petechiæ. We regard it as an ominous symptom. A female of 18 died in convulsions on the ninth day, and a male of 31 years. In neither was kidney disease recognized.

The treatment in general was symptomatic, the temperature being generally controlled by bathing. It was interesting to compare the death rate among those tubbed with that of those treated by sponging and by electric fan baths.

One hundred and twenty-four were treated by tubbing at a temperature of 70, or as near that as could be used whenever the two-hourly temperature rose to 102.5. Alcohol was given just previous if the heart was weakening perceptibly. This treatment was used in the severer cases generally, and was applied almost exclusively in the county hospital patients. Yet but eighteen of these patients died, a percentage of 14.5, which is exactly the average for all the cases. We regard this as a great triumph for the method, for the average death rate of all county hospital cases was 15.1 per cent., including many of the milder cases not tubbed.

The causes of death of the eighteen patients submitted to tubbing were: In three cases pneumonia alone. In eight cases, intestinal hemorrhage. One of these was convalescent from diphtheria, and had a systolic apical murmur; local peritonitis and pneumonia occurred in one case. Pyelitis complicated another case, and perforation another. Abortion in one case. Convulsions in one case. Perforation in one case. General hemorrhage in two cases. Long-continued pyrexia in one case. Nervous complications and relapse in one case. It is obvious that hemorrhagic complications are less under control by tubbing than other causes of death, and probably perforation as well.

About 350 cases are recorded to have been sponged, but as practically all not tubbed were sponged to a greater or less extent, and as a fan bath was used in a few, we shall not attempt to analyze these cases further.

We may conclude from this analysis of a considerable number of cases covering twenty years in different parts of Colorado that typhoid fever is practically the same disease here as elsewhere. Many cases called mountain fever by some have been included in this series, for we know of no such disease. Typical examples have had hemorrhages, rose spots, Widal reaction and many of the complications of typhoid, and are certainly typhoid. The false name is passing out of use here.

Dr. Hall concluded in 1889, from an analysis of his first 108 cases, that typhoid fever was milder here than in the East. A wider experience convinces him that it does not differ materially in this nor in any other respect from the disease as reported from this and most other countries. He believes that diarrhea is somewhat less frequent with us in Colorado.

We shall certainly continue for the present tubbing in severe cases, the avoidance of medicinal antipyretics, the use of alcoholic stimulants when called for by rapid and feeble pulse, and the recommendation of operation in cases of perforation seen early. We are not yet convinced of the advisability of feeding solid food before the fifth or seventh day after the temperature reaches normal, excepting in cases with exceptionally mild attacks and with clean tongue.

DISCUSSION

ON PAPERS OF DRS. HAPPEL, KRAUSS, HARBIN AND HALL.

DR. T. B. FUTCHER, Baltimore—I am not convinced that the cases referred to were not a mild form of typhoid fever. We all know that typhoid fever may present a great variety of clinical pictures; we all know that typhoid fever does not, in all instances, present enlarged spleen, epistaxis, rose spots, etc. There was one point in particular that impressed me, and that was the absence of a frequent examination of the blood serum for the Widal reaction. I believe that before we exclude the possibility of typhoid fever in these cases it is very important that the blood serum should be examined repeatedly for the Widal test. This is the routine at the Johns Hopkins Hospital, an examination of the blood serum in practically all cases of typhoid fever being enforced, especially when the patients leave the hospital, and a certain proportion of the cases show this reaction on the day of discharge.

There is another point that should be kept in mind that possibly they may have a paratyphoid infection. It is well known that in a large number of the typhoid cases among soldiers of the South African war, a number of them did not give the positive reaction after the Widal test, but were considered to be cases of paratyphoid infection.

The occurrence of chills and sweating in this series of cases is of interest. With reference to the coal-tar products it should be kept in mind that they will produce chills and sweating of a fairly severe grade. Chills and sweating may occur at the onset of the disease, at the onset of complications, or at convalescence; it should also be borne in mind that the coal-tar products will produce the same. Until more convincing bacteriologic and pathologic evidence can be brought forward to exclude the possibility of typhoid fever being the cause of these symptoms I think we must be rather conservative in stating that these cases are not cases of mild typhoid fever.

DR. JAMES TYSON, Philadelphia—While it is far from my wish to make a diagnosis in cases of continued fevers in Mississippi, I feel that in 30 years' experience in the study of fevers the tendency has been to limit the number of continued fevers. Each winter it happens to me to have one or more cases of anomalous fever which elude a diagnosis for a longer or shorter time, and invariably at the end of a certain period the cases will turn out to be typhoid fever, or malarial fever, or some of the more unusual modifications of typhoid fever, such as paratyphoid or colon-typhoid. On the other hand, there can be no doubt that fever may be kept up by irritating causes in the intestines, such as indigestible articles of food, or ptomains.

I was much interested in what Dr. Hall said regarding typhoid fever during pregnancy. In the wards of the University Hospital it has happened to me during the past winter to have had three cases of typhoid fever occurring in pregnant women, and their terminations were quite different from those we are led to expect from text-book descriptions of typhoid

fever in the pregnant woman. One was a woman eight months pregnant, and she was delivered successfully of a living child and recovered. The remaining two were pregnant five months, and both passed through an ordinary mild attack of typhoid fever and recovered.

DR. J. A. WITHERSPOON, Nashville, Tenn.—This question I have been studying for ten or twelve years. To say that this fever might be paratyphoid fever is begging the question. If it is paratyphoid fever it, then, is not typhoid fever. The germ of paratyphoid fever is very different from the germ of typhoid fever. However, there is a fever in the southern states which, clinically, is different from malaria or pure typhoid fever. I will detail a few of these differences. Several years ago I suggested for this type of fever "toxenteric fever." Why? Because I did not know the cause of this peculiar kind of fever. I do know, though, that it was due to some infection, possibly in the bowel, but whether it was due to some heterogeneous germs, or specific germs, I do not know. It starts out, as described in Dr. Happel's paper, but suddenly, not gradually; it does not specially occur in the season of the year that typhoid fever does; it occurs in all seasons; it does not occur at any particular age, but may occur anywhere from the cradle to the grave; one attack does not protect against further attacks, but makes one more liable. I have seen five different attacks occur in one individual. The bowels are rather regular and the prostation is early, sweating marked, with an irregular type of fever. I have seen a temperature at 9 a. m. of 105 F., and possibly by 10 or 11 o'clock, without the use of any coal-tar products, I have seen the temperature drop to 101 F. In two or three hours there might appear a sudden rise of temperature, then it comes down again, resembling a septic type of fever. I have yet to recognize the rose-colored spots on these patients which is present in most cases of typhoid fever.

The abdomen is not tympanitic, but is rather flat or scaphoid. These patients are constipated with possibly very hard masses, but there is no diarrhea such as we expect in typhoid fever. The tongue is not like that of typhoid, and is not tremulous. There is a lack of hebetude or other nervous phenomena, but rather there is present an irritableness; they exact something, and are rather hungry. Epistaxis is rare. There is a development of herpes labialis in connection with this fever which is rare in typhoid fever. I have yet to see an enlarged spleen. The affection may be paratyphoid fever, but certainly it is not pure typhoid fever.

DR. CHARLES F. MASON, Fort Sam Houston, Texas—I should like to add a few words and add to the testimony of Dr. Futcher, who insisted on repeated examinations for the Widal test if we wish to exclude the diagnosis of typhoid fever in cases of doubtful nature. Where I have been stationed I have seen many cases such as described by the first speaker. It is our custom to examine the blood several times each week both for the Widal reaction and for the plasmodium, with the result that, at some time or other, we have always found one or the other. I wish to emphasize the absolute necessity for repeated examinations. We all know how frequently we find the Widal reaction evanescent.

DR. J. L. CROOK, Jackson, Tenn.—This same question has been freely discussed in our state society. In regard to the diagnosis of these cases, I wish to state that, in my experience, when they have been treated as typhoid fever is treated they practically all recovered. These cases seem to be atypical cases of typhoid fever. With regard to the therapeusis, for five years it has been my plan to institute drainage and antisepsis by the use of calomel and carbonate of guaiacol. In a series of 140 cases the mortality has been less than 3 per cent. When acetozone was used in 9 cases there was no mortality.

DR. R. W. LINDSEY, Little Rock, Ark.—I believe we have a fever in the south that is different from typhoid fever, and from malaria. It is a continued fever, lasting from three to five or six weeks. There are none of the symptoms of typhoid fever, except that it is a continued fever. It is not as grave as typhoid fever. The exacerbations are as liable to occur in the morning as in the evening. Tympany does not occur, and the bowels, as a general thing, are constipated. Until this year, or last fall, I have never had an opportunity of testing microscopically the blood of these cases. Three cases were examined for the malarial plasmodium, and the Widal test made for typhoid fever. These cases lasted three, four and seven weeks respectively. The blood of these cases was examined the first day I saw them, before any quinin was given, and neither the typhoid bacillus nor malarial plasmodium was found. The blood was taken at different stages of the three cases and examined, with like results.

WEAKNESS AND DILATATION OF THE HEART IN CHRONIC NUTRITIONAL DISEASE.*

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I wish to invite your attention for a few minutes to some practical questions concerning certain aspects of cardiac pathology and therapeutics. These questions will be discussed with especial reference to my own experience. This experience, or at least that part of it which I have chosen as the basis of this discussion is perhaps sufficiently indicated by the title. It might be well, however, to add that the material among which cases of weakness and dilatation were found comprised about 600 cases of chronic gastritis, with about the same number of other forms of chronic diseases. These cases all occurred in private office and consultation practice. In all cases the heart was subjected to a careful examination with reference to the clinical changes of volume, either transient or permanent in character, which occur with varying states of tonicity of the cardiac muscle.

In perhaps no other department of practical medicine have greater therapeutic advances been made than in that relating to cardiac disease. If Senac could appear before this Association and ask, to-day, instead of the middle of the eighteenth century, his despairing question, "What can medicine do for dilatation of the heart?" he might receive for answer the records of innumerable relative or absolute recoveries. There are few, if any, better landmarks by which to measure the rapid strides of clinical medicine as distinguished from clinical surgery, and demonstrate the lack of consideration and truthfulness of the unfavorable comparisons thus often made.

The great work of Senac was the first important stone in the foundation of modern cardio-pathology and therapeutics, but the structure was very slow in building. Its outlines only began to assume a distinct form half a century later, with the advent of Corvisart, the great physician of the great Napoleon, and later by the labors and discoveries of Laennec, Bouillaud, James Hope and others.

Until a comparitively recent date the recognized pathology of the heart had too exclusive a reference to its orifices, its valves and its membranes. The muscular tissues of the heart to which these appendages are subservient was, in effect, assigned a secondary rôle.

It would be interesting, if time permitted, to epitomize the survey which I have recently made of the manner in which the great writers on the heart during the nineteenth century, which almost exactly corresponds to the evolution of the subject, have dealt with the heart muscle, but time will permit only a few references. Corvisart said that the heart distended the same as does the bladder with urine, but only considered shock, suppression of menses and hemorrhagic flux

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among the causes of dilatation.[1] He observed the frequency of dilatation of the heart in tailors, tanners, washwomen and others continually bending forward, and attributed it to compression of the aorta. He really devotes considerable space to the discussion of the heart substance, but it is, of course, in the light of a century-old pathology.

James Hope[2] more clearly recognized the ordinary changes in the condition of the heart muscle in dilatation, and treated cardiac dilatation as a primary disease.

Walshe[3] gave very little attention to the heart muscle, but made the important observation that "there are cases in which the heart notably loses its consistence, without there being any permanent blood disease or any obvious affection of the organ itself, except a deficiency in performance."

The work of Stokes,[4] published in 1854, was a great advance on any of its predecessors and really presented a very interesting and, at that time, advanced view of the morbid conditions of the cardiac muscle. He notes that the heart muscle is probaly liable to all the vital and organic changes found in muscle structure elsewhere.

The beginning of the last quarter of the nineteenth century witnessed the publication of Hayden's[5] ponderous volume of 1,200 pages, which, with liberal abstracts and epitomes of the work of his contemporaries and predecessors, fully reflected all the then existing knowledge regarding the heart. He was, perhaps, the first to fully recognize the very common clinical connection of dilatation with simple debility and softening of the walls of the heart from anemia and retrograde changes of the tissues without obstruction to the circulation. This volume is in itself an instructive, though somewhat out of date, library on the heart. I can not, however, deal further with this retrospective view of the pathology of the heart muscle.

Balfour[10] has well said, speaking especially of the heart, that the vigor of any muscle depends on the perfection of its metabolism. In practically all cases of chronic nutritional disease the metabolism of the entire body is notoriously at fault, and the heart muscle feels, with all other muscles, the loss of vigor incidental to its perversions. We are familiar with it in the lack of force and endurance of the voluntary muscular apparatus; it is conspicuous in the muscular atony of stomach and intestines, and we have learned to look for it and recognize it as a factor of vital importance in the functional integrity of the heart. In this connection it should be remembered that the nervous system, on which all muscular tissue is dependent for trophic and motor influences, is itself equally dependent on metabolism, with all that this implies, for the proper performance of its functions, and that the heart in such conditions suffers from a perverted innervation as well.

One of the first results of this weakness, so far as the heart itself is concerned, is an inadequate systole. We know that the ventricles of the perfectly normal heart do not completely empty themselves. At the close of every systole there is a very small amount of residual blood remaining in the ventricles. The precise amount must depend on the vigor of the ventricular contraction, and must increase with progressive weakness of the cardiac muscle. In its milder grades this amounts only to exaggerated physiologic distension, and perhaps only occurs when a slight demand is made on the heart for extra work, such as a degree of exercise that would not perceptibly effect a normal heart. As the weakness increases the overdistension results from still slighter causes until, finally, in certain cases it becomes permanent and constitutes what is clinically known as dilatation of the heart.

The occurrence of dilatation is dependent on at least one other important factor, aside from weakness of the cardiac muscle, namely, the arterial resistance. The resulting intracardiac tension is subject to great variations in both health and disease, but, in the absence of organic disease involving the arteries, it is always relatively low in cases of weak heart. But even when relatively low there is considerable pressure, even in the passive state. In health it amounts to perhaps 10 to 12 c.m. of mercury; in debilitated states it may drop to 5 or even much less, but a positive pressure equivalent to several c.m. of mercury is absolutely essential to the functional integrity of the organs supplied and this pressure must be overcome by the contraction of the cardiac muscle. If the heart muscle is unable to force its contents through the arteries against this pressure, an increasing amount of residual blood remains in the ventricles and dilatation results. It is perhaps only rarely that the weakness of the cardiac muscle is sufficient to lead to a continuous dilatation while the patient is in a passive state. The overdistension occurs in paroxysms coincident with a transient rise of pressure, usually the result of exercise. Exercise always raises the arterial tension, both in health and disease, and leads to transient dilatation, which the healthy muscle can overcome but the weak muscle can not, and in weakened conditions of the heart muscle these periods of overdistension are only partially recovered from, and when this occurs repeatedly the various grades of dilatation of the heart, slight or severe, ensue. It is in reality a frequently repeated overstrain of the heart. It is, in effect, precisely what occurs when the healthy heart is overstrained, only the results follow comparatively slight causes. Overstrain of the heart is altogether a relative affair. I think it is Stokes who relates a case in which a patient with an extremely weak heart was slowly improving by absolute rest in bed, not being even permitted to wash his own face. After considerable improvement, but, before being authorized to do so, he sat up in bed and washed his own face and fell over dead. This was simply fatal overstrain of a very weak heart from an apparently very trifling cause. In another case a similar result might follow walking across the room; in a third it would follow a short run to catch a street car or by hurrying up steps; while in a perfectly healthy heart the same result could be produced by sufficiently severe and sufficiently prolonged muscular exertion, as probably occurred in the classical case of the Greek soldier who delivered his message of victory and fell over dead. Hereditary tendencies, or at least an inherent inadequacy of the heart muscle, undoubtedly has much to do with the phenomena in any given case. Some hearts are primarily defective, just as are some livers and some brains, and readily succumb to causes which would not be operative in other cases.

The pathology of the cardiac muscle in the cases under consideration is quite variable. Eichhorst[13] says that weakness of the heart muscle may cause death without any macroscopic or microscopic changes in its structure. However, this is perhaps rarely true. The nutritional disturbances incident to chronic disease lead to various alterations in the texture of muscles in the heart and elsewhere. Barrie says[12] that when dilatation occurs there is always granulo-fatty degeneration

of the heart fibers and pigmentary infiltration. In such cases Gibson[11] and others speak of an indistinctness of the striations of the muscular fibers. Probably in all the severe cases there is some sort of change more or less marked in the cardiac muscle. While it is very desirable to have as full an understanding as possible concerning the pathology of each case, it can only be determined with a certain degree of probability. It has, of course, an important bearing on prognosis, but the existence of marked degenerative processes do not bar recovery. In many cases chronic myocarditis is probably the underlying morbid condition. The existence of certain types of chronic inflammation, as well as degenerative processes in chronic nutritional disease, is quite intelligible in the light of modern pathology. These various morbid processes are the result of subnutrition and toxins. The hemoglobin coefficient is usually low and there is scant material for tissue reconstruction, while, in addition and partly as a result, there is defective elimination on the part of the heart muscle itself of its own waste products, as well as of the body in general. The retention of leucomaines and other products of retrograde changes has a still further depressing influence on the function of the heart muscle and favors the development of the anatomical changes already referred to. But, in addition to this, and especially in the class of cases with which I have personally had to deal, we have a new factor in the introduction into the circulation of bacterial toxins produced in excess in the digestive tract. These toxins probably unite with the side chains of the protoplasmic molecules of the heart muscle, just as certain metalic substances are supposed to do with more or less impairment of functional power and, finally, with the production of genuine structural alterations of the character already indicated.

In the cases in which no microscopic alterations can be found in the heart muscle the tissues are softer and more easily torn, as long ago pointed out by Walshe.[3] It can scarcely be that such a physical change can occur in the heart muscle without antecedent structural alterations undiscoverable by our present means of research.

Although not strictly within the scope of this paper, I am tempted to briefly refer to syphilis, the very extensive prevalence of which, among all classes, makes it a frequent factor in the class of cases under discussion. Syphilitic involvement of the heart is probably much more common than is recognized, and is not a very infrequent cause of weak heart, leading to varying degrees of dilatation. Aside from the gummatous disease of the heart muscle itself, and involvement of the coronary artery, there is recognized by syphilographers a syphilitic myocarditis. And there is good reason to believe that, prior to the evolution of such gross changes as this, there is a period of weakness which, in consequence of proper treatment, may never pass into the stage of structural alteration. The hearts of syphilitic patients are very vulnerable, and this cause of cardiac weakness should receive wider recognition than is at present accorded it.

In chronic gastro-hepatic disease there are some reflex nervous phenomena which should be considered in addition to the factors already mentioned. The experiments of Morel and others have shown that, on stimulation of the terminal filaments of the pneumogastric or sympathetic nerves in the gastric mucosa, or possibly of both, there is a reflex spasmodic contraction of the pulmonary capillaries, with a rapid rise of pressure in the pulmonary artery and a transient dilatation of the right ventricle. If reflex irritation of these nerve filaments is continuously produced by a pathologic lesion, Barrie[12] says it may cause persistent dilatation, which may increase until there is tricuspid insufficiency with extreme ectasia of the right ventricle. He adds, however, that its relative infrequency in gastro-hepatic disease points to an individual predisposition which may, of course, be hereditary or acquired through the operation of some of the causes and conditions that I have already considered.

It is unnecessary to occupy time in dwelling on the individual chronic diseases which occupy an etiologic relationship to the condition of the heart muscles under discussion. Among them may be mentioned leukemia, chlorosis, all the different types of anemia, either secondary or those other types which in our ignorance we call primary, chronic diseases of the digestive organs associated with subnutrition and relative failure of elimination, excessive toxic conditions, etc. These various causes act on the heart in at least four ways: First, a failure to supply sufficient nutrient pabulum to the heart muscles because of a weakening of the complicated mechanism concerned in its accomplishment. Second, through the chemical influence of retention products, which are toxic in excess, and the absorption of foreign substances, for the most part, from the gastro-intestinal tract. Third, through the partial failure or perversion of the important phenomenon of innervation of the heart muscle. And, fourth, the purely mechanical factor which is operative from the moment when the cardiac muscle is unable to make an effective ventricular contraction against the resistance offered in the arteries. Sometimes one or several of these causes will predominate, but I think they will be found to fully explain the clinical phenomena presented.

The symptoms of heart weakness and dilatation vary within wide limits. It is scarcely necessary to dwell on the clinical manifestations of fully developed and well-marked dilatation of the heart, with its well-known train of symptoms. It is more important to emphasize the fact that there can be, and frequently is, a recognizable grade of dilatation, with either an entire absence of symptoms or at least such as can be elicited with great difficulty. The earliest symptoms are simply those of a weakened circulation, and in the various types of chronic nutritional diseases, with their associated debility and slight dyspnea following a given amount of exercise, are simply attributed to the general disease present. It is not until the dilatation has proceeded to a degree which will produce valvular incompetency by enlargement of the orifices or separation of the insertions of the papillary muscles, or both, that the obvious clinical picture of heart disease with dominant heart symptoms is presented. This condition, however, is preceded by a long series of events, with any one of which, perhaps, its onward march could have been arrested if duly recognized and properly treated.

The importance of these slighter and frequently unrecognized grades of dilatation of the heart is not limited to the heart itself, but, in addition, frequently furnishes the key to the entire ensemble of symptoms, which, while having a complicated origin, are possibly based more largely on lowered blood tension than on any other single factor.

I have not attempted to make any statistical statement of the number of cases in which demonstrable grades of dilatation have been presented, as such a statement with reference to so vague and diverse a group of cases would appear to be valueless. I will

say, however, that in a very large proportion of the cases which have been able to come to my office for examination and, perhaps, subsequent treatment, such a condition of the heart has been found. I should think that possibly 20 per cent. of these patients presented demonstrable enlargement of the heart, varying in degree from an enlargement so slight as to be doubtful until verified by a decreased area of dulness under subsequent treatment, to cases so severe as to make dyspnea on very slight exertion one of the principal complaints in the case. The diagnosis is based principally on the area of deep dulness, which has, of course, to be quite accurately determined. This I do not consider difficult in the vast majority of cases. Of course where there is emphysema or excessive obesity, it becomes proportionately more difficult. Broadbent[9] says that it can not always be determined, and further adds that the so-called auscultatory percussion is of no value whatever. With the last statement I must entirely disagree. By the use of the ordinary methods of auscultatory percussion or, better, by the use of the phonendoscope, with either light percussion or friction, the borders of the heart, and especially the left, can be determined with great accuracy. I have verified the results of these examinations, both by autopsies and skiagraphs, and have the utmost confidence in them. By placing the phonendoscope in the intercostal spaces over the area of absolute dulness and making very light strokes or friction sounds gradually extending outward, the border of the heart is easily recognized. The sharpness of the line of demarkation where the transition of sound occurs is really very striking. I only mention this because there is a more or less widely spread opinion such as that already quoted from Broadbent, that slight changes in the volume of the heart can not be clinically determined with accuracy.

In the severer cases regurgitant murmurs will sometimes be found constantly present over either the mitral or tricuspid area or both. In many of the milder cases, however, where such a murmur is not heard, it can readily be produced, while in others it can be produced with difficulty, and the readiness with which it can be elicited furnishes some indication of the tonicity and recuperative power of the heart muscle. The character of the heart sounds soon becomes modified as the case progresses, the first sound losing its characteristic qualities, more and more approximating to the character of the second, and, at the same time, the interval between the second sound and the first becomes gradually shorter, approximating more and more to the interval between the first and the second, until it finally becomes practically the same.

The treatment of these cases should have in view two principal objects: first, to improve the general nutrition and correct the defects and perversions of metabolism, which are the underlying causes, which includes rational and adequate treatment of any organ or set of organs which may be at fault, among which the digestive organs stand pre-eminent; and, second, when necessary, the application of special therapeutic measures directed toward the heart.

It would not fall within the scope of this paper to make any attempt at a discussion of the multiform methods included under the first heading. It need only be said that it includes and requires adequate nutrition, which means an ample food supply properly digested and assimilated to the fullest extent possible under the conditions presented; effective elimination of the products of retrograde changes which may be unusually toxic owing to morbid perversions in the chemical processes occurring in the tissues; tonic and reconstructive medication, such as the exhibition of iron and bitter tonics where these appear to be indicated; and, finally, the best mental and physical hygiene available under the circumstances of the case.

So far as the second object of treatment is concerned, it will frequently happen that no special measures directed toward the heart will be required, especially in the milder cases. Proper rest for the nervous system and the circulation conjoined with the measures already indicated may be sufficient to restore the heart to its normal condition and size. In many cases, however, I have found such special methods of treatment not only advantageous but necessary. Where the heart is quite weak, with frequent pulse and the blood pressure low, the cautious administration of digitalis for a brief period of time has been of the greatest service to me in these cases. Other heart tonics may also be employed. Such outdoor exercise as is indicated in the case should be graduated, with special reference to the heart, and in most cases forms an indispensable part of rational treatment.

I wish now to speak of the saline carbonated baths as a means held in reserve for the severer cases or even some of the milder ones which for some reason prove intractable. I am fully convinced of their very great value after having treated a considerable number of cases in this manner. I have found, in agreement with Broadbent and others, a remarkable decrease in the area of deep cardiac dulness as a result of a single bath properly administered. In fact, I am not aware of any other possible means of influencing so immediately and directly the dimensions and tonicity of the heart. I have found the left border of the heart more than one centimeter further to the right immediately after such a bath than it was before, and have verified the findings with the fluoroscope. At the same time the pulse will drop in frequency anywhere from 15 to 30 beats, with a corresponding improvement in volume and tone. The greater part of this phenomenal change is comparatively transient, but where treatments are given daily the heart does not lose quite all it has gained, and after three or four weeks of such treatment may attain nearly or entirely its normal size and remain permanently so under favorable conditions, which means, of course, a removal of the causal factors and a continued maintenance of the general health. Gibson[11] says that it is just in this class of cases that the very best results are obtained from the Nauheim methods. I believe this is true, and have certainly had most gratifying results in properly selected cases, although it is not used, as a matter of course, as a routine measure.

With the resistance movement I have had less experience, as my patients have, for the most part, been able to resort to active instead of passive movements; and properly graduated gymnastics and outdoor exercise have appeared to me to be all that was necessary.

In conclusion, I wish to emphasize the favorable prognosis of dilatation of the heart in most cases, even the coexistence of valvular disease not necessarily constituting an insurmountable bar; its relative frequency in chronic nutritional disease, and the strong probability that the milder cases, if unrecognized and neglected, finally present all the clinical features of advanced and incurable heart disease.

BIBLIOGRAPHY.

1. Corvisant, J. N.: A Treatise on the Diseases and Organic Lesions of the Heart, 1813, p. 139.
2. Hope, J.: Diseases of the Heart and Great Vessels, 1889.

3. Walshe, W. H.: A Practical Treatise on Diseases of the Lungs and Heart, 1851, p. 434.
4. Stokes, William: Diseases of the Heart and Aorta, 1854.
5. Hayden: Diseases of the Heart and Aorta, 1875.
6. Fothergill: The Heart and Its Diseases, 1879.
7. Clark, Alonzo: Diseases of the Heart, 1884.
8. See, G.: De Traite des Maladies du Coeur, 1893.
9. Broadbent, W. H.: Heart Disease, 1897, p. 21.
10. Balfour, G. W.: Clinical Lectures on Diseases of the Heart and Aorta, 1898.
11. Gibson, G. A.: Diseases of of the Heart and Aorta, 1898.
12. Barrie, Ernest: Traite des Maladies du Coeur, 1900, p. 629.
13. Elchhorst, H.: Practice of Medicine, 1901, p. 22.

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PAPILLOMA OF THE SOLE.*

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A wart is usually an insignificant affection, but when it grows in a confined space, as under the hard, thick covering of the sole, it may cause so much discomfort, it may be so persistent and so refractory to treatment and develop such an ugly appearance as even to simulate malignant disease.

It is not a frequent affection, as I have in my private practice seen only seven cases of it in about five thousand cases of diseases of the skin. In a careful search of the literature of diseases of the skin, mention has been found of only sixteen cases. But I have reason to believe that neither of my own private histories nor the literature give a true indication of the real frequency of the affection. People afflicted usually consult chiropodists and, after being treated, or maltreated, the wart disappears, either as a consequence of treatment or spontaneously. The chiropodists have a most striking name for the affection, calling it "a rose corn." This name is very appropriate to that form that looks like a callosity and, the callosity being removed, one finds a strawberry wart at the bottom of a well-like hole.

CASE 1.—The first patient who consulted me for this affection was a large, fat man, 56 years of age, whom I had been treating for eczema. He consulted me June 13, 1897, for what I thought was a corn on the right sole. The corn was very sensitive to pressure. I ordered salicylic acid plaster mull 10 per cent., and had the patient call shortly afterward, when I peeled off the epidermis. To my surprise I found a well, at the bottom of which was a wart-like vegetation. The mouth of the well was perfectly circular and nicely rounded and prominent. I reapplied the salicylic acid, removing layer after layer of the epidermis, till I had the wart well exposed, and then burnt it with nitrate of silver. I did not, however, burn it sufficiently. It is often necessary to press down the nitrate of silver stick into the hole, through the epidermis, although it is very painful to the patient. The wart in this case continued to grow until I feared it was a papillary epithelioma of the sole. After the second, more thorough, burning, however, the affection got well and never returned. In this case there were no other warts seen or complained of in any other region.

CASE 2.—Sept. 5, 1898, a man, whom I had under my charge seven years before for syphilis, eczema and herpes simplex, consulted me for what appeared to be a corn under the anterior part of the sole of the foot. The patient had had it mistreated by a chiropodist and, when he came under my care, was suffering much pain. His case was an almost exact repetition of the former one.

CASE 3.—On March 2, 1899, a man, 28 years of age, consulted me on account of a painful wart on the plantar surface of the ball of the left toe, which had appeared three months before. The patient was also suffering from eczema between the toes and from premature baldness. The papilloma disappeared under the same treatment as that employed in the two former cases.

CASE 4.—On April 27, 1900, a woman, about 30 years of age, consulted me on account of warts on the anterior portion of the sole of the foot. There was one large, flat, round wart, about one inch in diameter and looking like a corn, situated on the ball of the left great toe. This wart was not painful, and on examining it with a lens dark red strings could be seen running up through it. These looked like the capillaries of a soft wart in which the blood had coagulated. It looked entirely different from anything I had ever seen in the way of warts growing under the thick, hard epidermis of the palms or soles. As much of the top was shaved off as was possible without causing too much bleeding. A salicylic acid plaster mull was applied. By May 7, 1900, the large wart had separated out into several individuals, having white plates of epithelium over them, and the red strings above mentioned were now white, probably bleached out by the salicylic acid. This lesion therefore was not one wart, but a bunch of several warts. On this date two other warts were found, one in the very center of the anterior part of the left sole, and two others just in front of the original lesion on the ball of the great toe. June 20, I had the patient use at night salicylic acid, 3iiss, collodion flex., 3ii, and in the day time plaster mull. By June 27, two months after she first came to me, the epidermis was thinned down enough to permit of cauterization with nitrate of silver. Shortly after this the warts disappeared.

This was one of the most obstinate cases I have ever treated. The epidermis implicated in the wart was soft, spongy and resistant to the knife.

CASE 5.—Sept. 24, 1901, a boy, aged 14, consulted me for hyperidrosis of the right heel; the heel was reddened, and in the hollow of the foot there were a few rusty papules. October 30, I first noticed on the right heel two perfectly round holes, each about 2 mm. in diameter. These holes were filled with a perfectly white detritus, and at the bottom of the holes there were a few red, prominent papillæ. The epidermis was shaved down as close as possible and the papillæ were burned with nitrate of silver and a 5 per cent. salicylic acid plaster mull was prescribed.

Jan. 21, 1902, there was still a little remnant of one of the lesions, which was burned with nitric acid, after which the trouble disappeared.

This patient was an immensely overgrown boy and very stout. He was the only son of a doting mother, who was anxious about his health, because he ate so little at meals, but between meals, his sister told me, he ate constantly, a fact which his mother did not know, or possibly chose to ignore. Everything in the way of fruits, cake, candy and lump sugar disappeared in a miraculous way. These facts are mentioned as the consequent overnutrition very probably had something to do both with the hyperidrosis and the papillomata. He was just such an individual as one would expect to get seborrheic eczema.

CASE 6.—Jan. 21, 1902, a boy, 15 years of age, consulted me in regard to papillomata of the plantar surface of the right heel. The first one appeared one year before, and when he consulted me there were about a dozen visible. As much of the epidermis was shaved off as was possible without causing abundant hemorrhage, and the exposed warts were burned with nitric acid. An ointment composed of salicylic acid 20 gr., lanolin and vaselin each half an ounce was prescribed to be worn constantly. By Feb. 8, 1902, this ointment had peeled off the epidermis down to the quick, and a vast number of papillomata were uncovered. The whole heel presented a worm-eaten appearance, showing irregular, steep-edged holes, filled with epidermal detritus. All exposed papillomata were again burned with nitric acid. By February 26 everything looked well.

CASE 7.—Aug. 2, 1902, a man, about 19 years of age, consulted me in regard to what appeared to be a filamentous wart on the anterior surface of the right sole. The epidermis was peeled down as far as possible, the wart was burned with nitrate of silver and a salicylic acid ointment (30 gr. to the ounce) was prescribed. By August 6 the wart had died down or retracted so as to leave a circular hole about one-quarter of an inch in diameter, filled with a crumbly white mass, and showing the diminished wart at its bottom. A stick of nitrate

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of silver was pressed firmly into the hole, the same ointment was applied and in a couple of weeks he was entirely well.

Traumatisms, such as direct blows, heavy marching, nails sticking up in the sole of the boot, inequalities in the sock, or in the sole of the boot, have all been given as causes of plantar warts. Lenoble[1] attributed the affection in his case to heavy marching. Gorju[2] reported an instance consequent to walking on cannon balls. In the cases reported in this paper no history of traumatism was present. In three of the cases there was eczema, in one of them herpes, and in one hyperidrosis. All of these may indicate an irritable state of the skin favorable to the development of papillomata, but it is noteworthy that there were no warts found on any other part of the surface in these cases. William Dubreuilh, who has written by far the best paper on this subject, says that neither himself nor Bargues, whom he quotes, has ever found coincidence of warts of the soles and of the palms.

A wart on the sole usually first appears as an abnormally painful, large, lenticular, elevated callosity. After removing the hard epidermal covering, a well-like orifice is exposed with the papilloma in it. This appearance is what has given rise to the name "rose corn." The depth of this well-like hole is one of the surprises of the affection. Pain may be present for quite a long time before the appearance of the callosity. In a case reported by Gorju[2] pain was present for two months before the callosity was noticed.

Warts of the sole may also appear as filamentous threads growing up through a soft, white, elastic epidermal mass, as in Case 4.

A papilloma may also look like a soft tumor, implanted like a cork in the epidermis and emerging from a circular orifice and spreading out on the surface like the cover of a pot.

Dubreuilh says that the pain of the warts, like that of corns, is influenced by changes in meteorologic conditions. I do not remember any of my patients to have complained of this, but, as I never inquired, it may have been present.

Warts of the sole, as elsewhere, may disappear spontaneously; they may, however, last for years and cause a vast amount of pain and inconvenience. Lenoble reported a case where the tumor had begun twenty years before the demonstration of the patient before the dermatologic society. Melchior Robert had two cases, each lasting two years.[3]

Dubreuilh recommends curetting as the most rapid and effective treatment. Although the curette may have very little influence on the hard, resistant walls of the cavity, this does not matter. The essential is to clear out the contents, which can be readily done. The profuse bleeding can be stopped by pressure, and the wound is to be dressed according to ordinary surgical principles.

Bargues recommends frequent cauterizations with pure nitric acid. The objections to cutting out such growths are the difficulty of reaching the base through the thick epidermis, the great pain occasioned by the cutting and the liability of leaving a cicatrix in a situation where a scar is very undesirable. All these disagreeable features may be avoided by first softening the hard epidermal covering, and so exposing the part to any treatment, such as would be applicable to warts occurring on the thin skin of other parts of the cutaneous surface.

1. Ann. de Derm., S. 3, T. vi, p. 1156.
2. Ibid., p. 441. Quoted by Dubreuilh.
3. An. de Derm. et de Syph, Serie iii, Tome viii, p. 1248.

THE MANAGEMENT OF FEVER IN GENERAL.

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PHILADELPHIA.

In the present state of knowledge fever must be looked on as a symptom-complex resulting from some derangement of the bodily chemistry, from some disturbance in metabolic equilibrium, which may be brought about in a variety of ways. The causative factors may be generated within the body, or they may be introduced from without, in either event operating through the agency of the nervous system. Thus, fever may result from the retention within the body of the excrementitious products of retrogressive metamorphosis, as in cases of uremia; in consequence of profound changes in the blood, as in cases of anemia; from exposure to intense heat, as in cases of insolation; and it occurs readily in children—in whom the nervous system is notoriously unstable—on slight provocation, such as gastrointestinal derangement and even emotional influences. Most commonly, however, fever is due to changes secondary to infective processes—in other words, to the toxic effects of the products of bacterial and cellular activity.

Of the ultimate mechanism of the febrile process nothing definite is known. It is a well-recognized biologic fact that plants and animals are provided with the means for adapting themselves to variations in the surrounding temperature, so that they produce or conserve a greater amount of heat when exposed to low, and a lesser amount when exposed to high, temperatures. Loss of heat in man is counteracted by contraction and favored by dilatation of the peripheral blood vessels. It is reasonably certain that this regulatory power is lodged in the central nervous system, and it is believed that it is under the control of a hypothetical thermotaxic mechanism, which maintains the relations between heat-production and heat-dissipation under varying conditions.

The most distinctive and the most constant feature of the febrile process is elevation of temperature. Although it is customary to attempt a differentiation between fever and pyrexia, it is a question whether such a distinction can be successfully made. It is true that occasionally certain conditions ordinarily febrile, such as typhoid fever, typhus fever, septicemia and scarlet fever, are unattended with pyrexia, but under such circumstances it may be that the pyrogenic substances usually produced are not generated or are not absorbed, or that their effects are neutralized by antipyrexial substances generated within the body. Nevertheless it is doubtful whether we can recognize a febrile process in the absence of elevation of temperature, or if pyrexia occurs in the absence of fever. Those who endeavor to maintain a distinction between fever and pyrexia take the ground that elevation of temperature of non-febrile origin is due to either increased heat-production or diminished heat-dissipation, or to both, while the elevation of temperature attending the true febrile process is due to an elevation of the heat-regulating mechanism to a higher level without alteration in the relation between heat-production and heat-dissipation. It has been thought that elevation of temperature in the presence of infectious diseases is a conservative process, perhaps having antibacterial or antitoxic value, but as to the accuracy of such a view the evidence is not conclusive.

Other symptoms of the febrile process, such as accelerated action of the heart, increased frequency of respiratory movement, circulatory changes, alterations in secretion, assimilation and metabolism and in function generally, may be due to the same factors as the underlying morbid state or to the pyrexia, or to a combination of the two. The problems, therefore, that confrom the clinician in the management of a patient exhibiting fever comprise the removal of the causative and underlying factors in so far as this is possible, and the restoration of the metabolic equilibrium, whose derangement is manifested in the various disorders of function. Often little or nothing can be done to fulfill the first indication, as the underlying morbid process is a specific and self-limited one insusceptible of abortion or abridgement, but unless there be some contra-indication, some form of elimination or evacuation or attenuation may with advantage be instituted, such as emesis, catharsis, diaphoresis, diuresis, enteroclysis, hypodermoclysis, intravenous transfusion. Through emesis irritants will be removed from the stomach and infection by way of this organ averted or absorption of poisonous substances from its cavity prevented. Catharsis will perform the same office for the intestinal tract, and besides exert a derivative effect. A like statement may be made with regard to diaphoresis for the skin, and with regard to diuresis for the kidneys, while by means of intestinal, subcutaneous and intravenous infusion poisons circulating in the blood will be diluted, and their elimination through the emunctories expedited, while a useful stimulating influence will be at the same time exerted.

With the aid of the measures named it may at times be possible to remove the primary cause of disturbance, but even when this can not be done we may be able in this way to mitigate the severity of its effects, and thus in part contribute also to the fulfilment of the second indication, namely, the restoration of the metabolic equilibrium and the correction of disordered function. Reduction of temperature may be indicated when the pyrexia is excessive, or has been unduly long continued. It is best effected by the application of cold, wet or dry, in the form of the tub bath, the sponge bath, the sprinkle, the affusion or compress, the spray, the coil, the ice bag or ironing with ice. Antipyretic drugs are as a rule not necessary, while their use is at times attended with danger. To sustain the respiration and the nervous system, alcohol, aromatic spirit of ammonia, strychnin, digitalis, strophanthus, caffein or atropin may at times be needed. Should delirium and restlessness persist despite such treatment, bromid, chloral or morphin may be administered cautiously. The diet should be simple, bland, nutritious, easily assimilable, including milk, broths, eggs, beef juice and similar articles. Cracked ice and cool water or lemonade or orangeade and the like may be given with reasonable freedom, preferably in small amounts frequently. A daily movement of the bowels should be secured, if necessary by means of enemata or by the cautious administration of calomel followed by a saline.

Statue of Pasteur at Chartres.—The portrait statue recently unveiled at Chartres deserves more than a passing mention, as it is the work of a physician, anatomist and sculptor, a native of the town, Dr. P. Richer, now of Paris. The marble bust of Pasteur rises above a bronze bas-relief depicting scenes in the campaign against anthrax in sheep by the inoculations originated by Pasteur which have saved the chief industry of the province from destruction. The total height of the work is nearly fourteen feet, while the base is twenty-two feet in diameter.

EARLY EYE SYMPTOMS IN A CASE OF MYASTHENIA GRAVIS.

CASSIUS D. WESCOTT, M.D., AND BROWN PUSEY, M.D.
CHICAGO.

In a thesis[1] for the degree of M.D. at Cambridge on the subject of "Myasthenia Gravis," Chas. S. Myers records the undoubted and completely studied cases of this disease. His list contains 22 cases; in 12 there was partial or complete external ophthalmoplegia, in 9 diplopia, in 14 ptosis. These findings and the fact that in 13 of the 22 cases in Myers' list the paralyses of the eye muscles were of the very early symptoms that showed themselves, suggests the publication of the history of the eye symptoms of the following case.

Fortunately, our case has not been completely studied (Myers includes only cases that have come to autopsy), but it has gone far enough to emphasize the fact, which agrees with the findings of Myers and which has been pointed out before, e. g., in the recent article of Sir William Gowers,[2] that the eye symptoms may be the first complained of. The early diagnosis of the disease is certainly desirable, and may be very important, because of its bearing on treatment. It is reasonable to suppose that the chances for recovery will be favored by an early diagnosis, for suggestions have come regarding treatment as our knowledge of this obscure disease has increased, and cases have been reported in which the patients appear to have recovered. The following is an abstract of our notes:

Nov. 6, 1899. W. E F., male, aged 20, a telegraph operator by occupation. Complains of red and uncomfortable eyelids, of blurred and double vision; when he looks at anything, it at first appears double, and he has to close one eye to see. The eyes have given trouble during the past summer. There is a chronic conjunctivitis. L V.=6/9; R. V.=6/7. Esophoria 22°. L. hyperphoria 8°. Accommodation unaffected. Refraction under homatropin and cocain:

L. V.=6/5 with —1.00 D. Sph. —0.50 D. Cyl. Ax. 25°.
R. V.=6/5 with —0 75 D. Sph. — 0.25 D. Cyl. Ax. 120°.

The above correction, less 0.25 D. Sph., was given for constant use, and the patient was asked to return within ten days or two weeks for observation.

Nov. 17, 1899.—Patient states that he is improved, but still complains of blurred vision. Examination shows esophoria 12° (a decrease of 10°), left hyperphoria 8°. Encouraged by the decrease of esophoria, the patient was told to continue the use of the glasses and to report again in two weeks.

Dec. 8, 1899 (one month after the first examination). The patient states that he can work all day and until midnight, and that there is no blurring of the vision. No esophoria, left hyperphoria 3°.

Jan. 4, 1900.—Has been overtaxing the eyes, and they are red and weak again. Has some double vision at times. Exophoria 1°; right hyperphoria 3°.

The patient did not return again for two and a half years.

July 3, 1902.—Recently has had double vision, and "focusing the eyes is difficult." Exophoria 11°, no hyperphoria. Accommodation normal, and the pupils react normally. Vision with glasses, left eye and right eye, 6/9. Has not noted anything wrong in his general condition. Advised re-examination of the refraction.

Aug. 6, 1902.—The patient returns complaining of the same symptoms that troubled him one month ago. Refraction under homatropin and cocain:

L. V.=6/5 with —1.62 D. Sph. —0.50 Cyl. Ax. 60°.
R. V.=6/5 with —1.50 D. Sph. —0.50 Cyl. Ax. 110°.

The above correction, less 0.37 D. Sph., was given for constant use, and the patient was asked to return shortly.

1. Journal of Pathology and Bacteriology, 1902, September, vol. viii, No. 111, p. 306.
2. Myasthenia and Ophthalmoplegia. British Med. Jour., 1902, May 24.

One month and twenty days later he returned, when there was paralysis of convergence and slight ptosis of the left upper lid. The pupils reacted normally; the accommodation was not affected, and the patient said that he could work at his desk very comfortably when one eye was closed. The fundus was normal. He was referred to Dr. H. N. Moyer, who made the diagnosis of myasthenia gravis, and exhibited the patient before the Chicago Neurological Society.

Although the findings in this case will be more completely published later, it seems appropriate to call attention here to some of the facts pointed out by our notes. The most important one is that already cited, that the eye symptoms in this disease may be the first signs of trouble. Of course, this is assuming that our patient was afflicted with myasthenia gravis when he complained of double vision in November and December, 1899. Even if it is not granted that the disease existed at that time, it seems safe to venture the opinion, in the light of the after-history, that as marked a variation in the muscle balance as this case showed between Nov. 6 and Dec. 8, 1899, must attract unusual attention and be carefully studied, and, if possible, satisfactorily explained.

The absence of involvement of the muscles of accommodation in September, 1902, (when he could work at his desk very comfortably if one eye was closed) is interesting. Based on observations up to that time, this case agrees with the findings of Myers, who notes the absence of involvement of the ciliary muscles in the cases studied by him. The possibility of the escape of the ciliary muscle in this disease, and the fact of the difference histologically between it and the external muscles, could well give rise to some speculation. This, however, is upset by Gowers' report, in whose case there was interference with accommodation, and the same is now true of our patient.

The variation in the refraction may have some significance. According to our examinations, which were made with homatropin (homatropin hydrobromate, gr. x; cocain hydrochlorate, gr. x; water, ℥i, of which mixture a drop was put into each eye every five minutes for thirty minutes, and the examination was made forty-five minutes after the last application), the myopia increased 0.75D, and the investigation of the subject brings a letter from the patient, which says: "In early life I seemed to be able to see fully as far as anyone, and, so far as I know, my vision was not shortened until just previous to my first call on you." It will be recalled that at the time of the first examination there was slight myopia. If there is any relation between the disease and the myopia, it would be curious. How is it to be explained?

The cessation of symptoms in this case for over two years calls attention to one of the three signs, which Myers says may be described as pathognomonic of this disease, viz.: exacerbations and remissions shown in its course, and warns us to be careful about pronouncing a recovery in any given case.

Clinical Report.

PYONEPHROSIS WITH A KIDNEY-COLON FISTULA.

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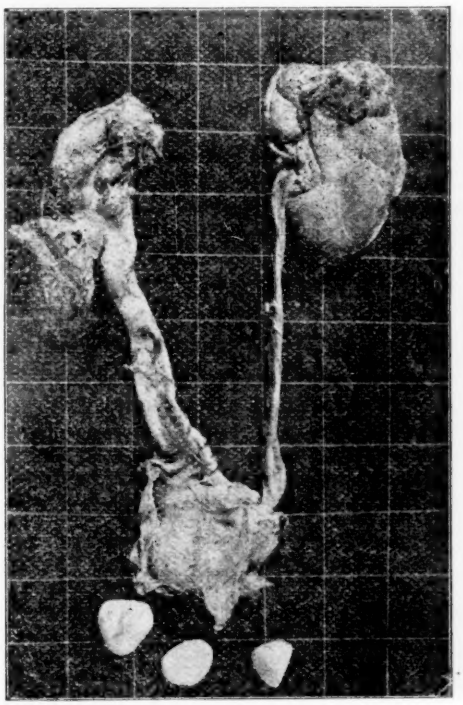
History.—The patient, a man, aged 37; white; occupation railroad conductor; entered the service of Dr. Gordon K. Dickinson at Christ Hospital, Jersey City, for operation, with a diagnosis of vesical calculus.

Family history was negative. The patient had the usual diseases of childhood; twenty-five years ago an attack of typhoid fever; five years later a gonorrhea and a slight stricture of the urethra. He uses tobacco and alcoholics in moderation. Two and one-half years ago he began to complain of a burning sensation, and often severe pain on micturition, with interference to the free passage of urine, and at times a sudden stoppage during the act of passing it.

He states that he has never passed blood in his urine. Lately he noticed that he was losing weight and appetite. He states he has had no chills or fever since the attack of typhoid fever 25 years ago. He gives no history of constipation or diarrhea, and the evacuations of the bowels are regular. His temperature for the three days previous to operation was normal and subsequent to it not above 100 degrees.

Operation.—A suprapubic lithotomy was performed and three calculi weighing collectively 168 grams were removed. There was no suppression of urine subsequent to the operation. The third day the patient died.

Necropsy.—All the organs, with the exception of those later mentioned, were normal, save that the intestines showed some slight adhesions. The bladder wall was much thickened. The interior of the viscus had a ribbed appearance. The veins were somewhat prominent and the mucous membrane was



of a yellowish color, and covered with shreds of mucus and urinary salts. The right ureter measured one inch and a half in diameter, and was of a leathery consistence. The left ureter was about three times the usual size, being somewhat tough to the touch.

The right kidney was normal in size and was adherent at its lower end to the colon. On sectioning it proved to be a typical pyonephrotic kidney, only a thin wall of kidney structure, possibly one quarter of an inch thick, remaining. It was connected, as shown in the illustration, with the colon, by a fistulous tract one inch long. The left kidney was much enlarged, the capsule non-adherent, and projecting from its surface were three cysts, the one shown in the illustration at its upper portion being two inches in diameter. All these cysts contained a urinous fluid. This kidney showed a chronic diffuse nephritis and contained two half-inch calculi in its pelvis.

41 Crescent avenue.

Rules for writers, as given by the *Saturday Evening Post*, are as follows: 1. Have something to say. 2. Say it. 3. Quit writing.

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A METHOD OF RENDERING ULTRAMICROSCOPIC PARTICLES VISIBLE.

During the last few years bacteriologists have come to attribute a rapidly increasing number of diseases to microbes that are too small to be seen with our best microscopes.[1] With these instruments and the ordinary method of illumination Helmholtz and physicists in general tell us that it is not possible to get a clear image of an object that is less than ¼ micron in diameter. Recently, however, two German physicists, Siedentopf and Zsigmondy[2] have perfected an apparatus by means of which they are enabled to see particles having a diameter of 0.005 micron or even less. They make use of the best microscope that can be furnished by Zeiss and illuminate the preparation to be examined with a cone of intense sunlight or light from an electric arc. The light is concentrated by means of a system of condensors, and the vertex of the cone thus formed strikes the axis of the microscope at right angles and illuminates the preparation in such a manner that none of the light enters directly into the objective. Under these conditions ultramicroscopic particles lying in the field of the objective will send enough light through the microscope by refraction and reflection to give a clear image. These images, however, are merely luminous points, the brilliancy of which varies directly with the size of the particles. In order that two particles lying side by side may give two distinct images it is necessary that they be placed at least ¼ micron apart. Particles of considerable size, 0.1 micron or more in diameter, give two images, one reddish and the other greenish yellow. From the appearance of these images it is not possible to judge the size and shape of the particles, although the larger particles are more brilliant than smaller ones.

Further details may make this a little plainer: The observer and his instrument are placed in a dark room, in one of the walls of which is a small opening provided with an iris diaphragm. By means of a heliostat placed outside, a ray of sunlight, or electric light, is reflected horizontally into the dark room through the opening in the iris diaphragm. This ray of light strikes a rather large lens, which throws a real image of the sun on a small slit copied from the microspectroscope of Engelmann. The size of this slit can be accurately adjusted by two micrometer screws. It can be varied from 0.05 mm. to 0.50 mm. in width by 0.1 mm. to 2.0 mm. in length and must vary according to the size of the particle to be examined. Behind the slit is placed a second iris diaphragm, a polarizer, and then a second lens, which forms an image of the slit one-quarter its actual size. Behind this image is placed a microscopic objective (AA of Zeiss), which acts as the last condensor and forms a second image of the slit, 1/9 as large as the first one, or 1/36 as large as the slit. This small image falls on the preparation to be examined and intensely illuminates a field about 1.5 microns deep by 3 microns wide. A few additions must be made to the microscope. For the examination of solids a small additional stage 2 by 4 cm. is fastened to the large stage of the microscope stand. This miniature stage can be moved up and down by means of a fine screw and thus enables the operator to bring his preparation into the path of the illuminating rays. For the examination of liquids the inventors have devised a small container which can be screwed to the objective. This brings the first lens of the objective in contact with the liquid and obviates all focusing. Provision is made for moving the liquid and thus bringing different particles into the field of study. The sides through which the light enters and leaves the container are best made of quartz which has been deprived of its double refracting quality by melting.

The authors of the memoir have already carefully studied the small particles of gold that are found in glass which has been colored ruby red with a small quantity of this metal. With the ordinary illumination and the highest magnification obtainable with a Zeiss microscope this glass appears perfectly homogeneous. By using the intense illumination obtainable with their new apparatus, each individual particle becomes visible as a minute luminous point. The size and weight of these particles can now be approximately determined in the following ingenious manner. The amount of gold in 1 cu. mm. is determined by chemical analysis, = W mg. The number of particles in a known bulk of glass is determined by counting and from this may be calculated the number in 1 cu. mm., = n. It now follows that the weight, w, of each particle is $w = W/n$. The specific gravity of gold is about 20, and hence the volume, V, of each particle is $V = W/20n$ cu. mm.

The authors have also begun a study of colloidal solutions and Mouton[3] has suggested the use of the apparatus in the study of bacteriology. In order that a transparent medium, containing ultramicroscopic particles, may lend itself for examination it must fulfill the following requirements: 1, The particles must not be less than .5 microns in diameter; 2, they must be at least 0.25 micron apart; 3, the index of refraction of the particles must be different from that of the medium in which they are suspended. Nothing has as yet been done in the study of ultramicroscopic organisms, but, as Mouton suggests, much is to be expected from this new field of investigation. So far the best evidence of the existence of pathogenic agents too small to be seen is furnished

1. THE JOURNAL A. M. A., Dec. 14, 1901.
2. Annalen der Physik., 1903, x, 1.
3. Bull. de l'Institut Pasteur, 1903, i, 97.

by the results of filtration experiments. In a large number of animal diseases of unknown etiology the virus has been found to remain active after passing through solid filters that ordinarily hold back even the smallest known bacteria. So far extreme minuteness of size is the most satisfactory explanation of such phenomena. If the method reviewed in the foregoing proves of service in the study of etiology, we shall have a further and striking example of the fact that progressive medicine is largely dependent on the application of physics and chemistry to the study of disease.

DANGER FOR AFTER-DINNER SPEAKERS.

The importance of the study of blood-pressure in pathologic conditions has become generally recognized, but its physiologic variations are hardly of less interest. There are some conditions, not directly pathologic in themselves, but readily made so, in which variations of this factor may have a supreme importance. In an article in the *Lancet*,[1] and abstracted in THE JOURNAL,[2] Dr. George Oliver describes the periodic variations of blood-pressure, especially its increase, and the factors which produce this increased pressure. He finds that the digestive wave of increased blood-pressure is a predominant one, and that it is only temporarily affected by exercise, temperature, etc. There is a uniform rise after eating of some 12 or 18 c.c. of mercury, as shown by the hemodynamometer; the upward rise is rapid, occurring within an hour or little more, while the decline is gradual, and lasts until nearly the next meal time. Thus the rise after a moderate meal is less than after a full one, but the fall occupies about the same time in either case. It is a little surprising at first thought that a rise of blood-pressure should occur simultaneously with the congestion in the splanchnic region attendant on digestion, but Oliver shows that there is a systemic congestion with the splanchnic dilation, with increased peripheral arterial tonus, and it is probable that this plays a physiologic part in the nutrition in causing, as he points out, concurrent exudation into the tissues of nourishing fluid expressed from the blood into the interstitial spaces. The pathologic or semi-pathologic significance of this fact is that of the danger of aggravating the normal physiologic blood tension into a pathologic condition by other factors which may aggravate the tension, such as mental or physical work.

It has long been known that a man is not at his best for hard mental work directly after a hearty meal, but the real dangers of work under such conditions are perhaps hardly appreciated. The tension is increased not only in the arteries of the body, but also, in all probability, in those of the brain, and this makes it easy for a weakened point to give way. The still unsettled question whether or not vasomotor nerves exist for the cerebral arterioles here suggests itself with the consequent queries as to the regulation of the cerebral circulation. It certainly does not appear that brain hypertension is materially relieved by any splanchnic diversion.

We recently have had a striking instance of death from apoplexy occurring in a prominent physician while making an after-dinner speech, and the notable death of Hon. William Windom a few years ago under similar circumstances will be remembered; and still other cases might be mentioned. The dangers from this cause have not been recognized, but when we remember that these public banquets involve a pretty hearty ingestion of food and a consequent rise of blood-pressure, it need not be wondered at that sudden deaths from "apoplexy" during after-dinner speeches are often recorded.

Apoplexy is a well-known possibility of mental strain; the weak point may be unknown to the subject himself and not revealed by any objective symptoms. The individual may have passed a life insurance examination successfully only a short time before, as is reported to have been the case with the physician above referred to, but the special stress becomes too strong for some point of weakness, and the result is fatal. It is not work, whether mental or physical, that kills. Intellectual workers, as a rule, are among the longer lived, but special stress under certain circumstances, such as post-convivial occasions when the normal tendency to rise of blood-pressure in the peripheral circulation is most marked, may be disastrous. This danger of mental effort directly after eating is one that possibly needs to be emphasized.

We do not wish to attribute too much importance to the idea, but it is one that is based on physiologic facts, and, therefore, theoretically at least, worthy of attention. It might, perhaps, be well from a hygienic point of view—and possibly from other points of view—if after-dinner speaking were dispensed with.

THE CONTROL OF MALARIA.

Based on the facts that the diagnosis of malaria can be made by microscopic examination of the blood, and that the malarial parasites are destroyed by the proper, continued administration of quinin, Koch and his collaborators instituted a systematic campaign toward the complete eradication of malaria in several more or less well circumscribed districts. They assumed that the malarial parasites can live only in mosquitoes and human beings. If the truth of this assumption be accepted—and there is no reason to question it—it follows that it becomes possible to eradicate malaria in either one of at least two ways, namely, either by destroying the malaria-carrying mosquitoes, thus preventing the parasites from multiplying and infecting new patients, or by securing such control of the malarial patients in a given locality that all the parasites in their blood are destroyed by the prolonged use of quinin, thus again preventing further multiplication of the infecting agent.

It is the latter method that Koch has put into practice, and the reports[1] on the work so far indicate that the results are satisfactory. Certain well-defined areas

1. June 13.
2. July 4, p. 63.

1. Zeitschr. f. Hyg. u. Infektionskr., 1903, xliii, Heft 1.

infested with more or less malaria were selected and placed under the supervision of competent men to look after the details. Thus an island, owned by one man, and containing a population of a few hundred people, a certain percentage of which generally suffered from malaria, was placed under the complete control of Professor Frosch. First systematic blood examinations were instituted and every case of malaria thus revealed was subjected to a thorough treatment with quinin, the administration of which was continued for three months after the active symptoms had subsided. Naturally, this procedure was repeated, and with the result that at the end of two years the malaria was destroyed, at least for the time being. Other reports show that in this way it is possible to greatly limit the disease, even in places where the population is more actively fluctuating, and in which the liability of the introduction of new cases of malaria is much greater. In these experiments—for experiments they were, though on a large scale—no special precautions were taken against the mosquitoes.

It would seem that in order to render a region permanently free from extensive malarial outbreaks it would be desirable to institute also measures looking to the destruction of mosquitoes, as recommended by Ross especially. Of course, if there are no malarial parasites in the blood of the inhabitants of a community then there can be no danger of mosquitoes carrying the disease to others. But so long as there are present the proper mosquitoes (anopheles) the immigration of new cases of malaria, which it might be impossible to prevent, may become the starting point of a new crop of malaria. Koch's method appears to be perfectly practicable, however, and the results now published show what great work can be done to limit a disease when its mode of dissemination and nature are so thoroughly understood as is the case with malaria. In order to carry out successfully undertakings of this kind it is necessary to perfect comprehensive organization under expert guidance, and to follow out the principles laid down with the most conscientious attention to details.

ROTATION OF HOSPITAL SERVICES.

In his address as chairman of the Section on Practice of Medicine at the New Orleans meeting of the Association,[1] Dr. Thayer refers to some of the evident shortcomings of the majority of our public and semi-public hospitals. He says that the most serious hindrance to advance in clinical study and teaching is the prevalent custom of rotation of hospital services.

Probably no competent, thoughtful medical man can question the force of this criticism. The first requisite for systematic clinical teaching and study is continuous, permanent service. Nothing but perfunctory, routine work can be expected when the chief of a service changes every three to six months. In business undertakings of all kinds, in schools and other institutions such rotation of service does not obtain. It exists in so many of our hospitals on account of the fact that physicians give their time and service to the hospitals without any direct compensation. The rotating service is a makeshift to lessen the individual burden.

If our hospitals are to grow in usefulness and develop progressively this makeshift must give way to the fully organized services with permanent chiefs and graduated staffs of assistants down to the interne and clinical clerk, as outlined in Dr. Thayer's timely address. The advantages of this plan to all interests concerned—the patients, medical teaching, medical investigation—are so evident and have been so often emphasized in these columns that it need not be dwelt upon in detail at this time. This is the day of organization in all lines of work of general importance. Our Association is passing through this stage in its development with so greatly increased a usefulness that it already may be pointed out as an object lesson to be followed in other directions of vital importance to medicine in our country. The next order may well be the earnest planning for a thorough reorganization of the hospital services. In every large city of the United States are public and semi-public hospitals in which the work suffers from lack of adequate organization to such an extent that conditions in many places really can not stand with credit even hasty investigation.

The first step in this advance must come from the medical profession itself. It is not creditable to a great profession like ours that its members permit themselves to be party to slipshod methods of hospital work merely because politicians and lay managers will not or do not know enough to institute rational principles into the hospitals in their charge. Our students suffer under the present system because of the great lack of opportunity to study disease in its manifestations in the living and the patients in the hospitals suffer because they do not receive the best care and treatment, to say nothing of the more indirect but far-reaching evils that must follow the sending out each year of so many hundred admittedly unqualified young men and women to practice medicine. We hope that continued agitation of this subject soon will awaken the altruistic spirit that ever must guide the medical profession, and that systematic efforts be made to improve the present conditions in our general hospitals.

THE DANGERS OF GELATIN INJECTIONS.

Since gelatin injections were first recommended for the control of severe hemorrhages in various organs, and for the treatment of aortic aneurism, they have been used quite extensively. Much has been said in favor of this method, but several deaths have resulted. The fatal results were due to such complications as septic thrombosis, phlegmons, malignant edema, and particularly to tetanus.

Several communications have recently appeared which again strongly emphasize the dangers connected

1. THE JOURNAL A. M. A., July 4, 1903, p. 1.

with the subcutaneous injection of gelatin. Chauffard[1] reported a fatal case of tetanus following a gelatin injection, and states that seventeen similar fatal cases have previously been placed on record. Dieulafoy[2] a few weeks later reports another instance of fatal tetanus developing after a gelatin injection given to control a severe tubercular hemoptysis, and he adds four more cases not included in Chauffard's statistics, bringing the total number of such deaths to twenty-three.

Quite an elaborate study on the dangers and the therapeutic value of gelatin injections has just been published by Doerfler,[3] who has twice lost patients from tetanus following subcutaneous application of gelatin. In one instance the method was resorted to to control a severe postpartum hemorrhage, in the other case to stop a tubercular hemoptysis.

It is now well known that fatal tetanus following gelatin injections is almost universally due to the introduction of tetanus spores with the gelatin in which they were contained. Levy and Bruns obtained tetanus bacilli from eight out of thirteen samples of gelatin examined. It was formerly believed that the spores of the tetanus bacillus are killed by an exposure during eight minutes to streaming steam at 100 C., but the authors quoted have shown that even after thirty minutes' exposure some tetanus spores survive, and only after thirty-three minutes were all samples of infected gelatin so exposed found absolutely free from tetanus germs. According to Forster and Brehmer larger masses of gelatin must be exposed forty minutes to a temperature of 100 C. to 120 C., and this after a preliminary warning, before all tetanus spores are killed. Many of those who have used gelatin injections have not been aware that it is necessary to so extend the period of sterilization.

In quite a number of fatal cases of tetanus following gelatin injections it was subsequently demonstrated that the gelatin used contained tetanus bacilli or spores. In other cases the sterilized gelatin left was found free from living tetanus spores. We understand now that the sterilization was insufficient, and while it may have made one part of the gelatin prepared free from tetanus spores, it left them alive in other portions.

Doerfler states that prolonged and energetic sterilization does not at all interfere with the therapeutic value of gelatin, and that if indeed sterile it is absolutely void of any danger. He concedes that the great hopes placed in gelatin injections in the treatment of aortic aneurism have not been realized, but that it has done excellent service in tubercular hemoptysis, or pulmonary hemorrhage from other causes, in intestinal, renal, vesical and uterine hemorrhages, in hemophilia and in melena neonatorum.

NATHAN STRAUS' WORK IN CHICAGO.

The philanthropist, Mr. Nathan Straus, who has made famous Straus' milk throughout New York City, has transferred his activities to Chicago, and has donated a milk pasteurization plant to the Children's Hospital Society of that city, giving its installation his own personal attention. A few such persons using their surplus wealth for the public good in this discriminating manner could materially affect the infant mortality in many of our crowded urban centers. It is to be hoped that others will follow his example, if not in this in similar lines.

1. La Semaine Medicale, 1903, No. 14, p. 3.
2. La Semaine Medicale, 1903, No. 19, p. 152.
3. Die Therapie der Gegenwart, Berlin, 1903, p. 118.

THE "HERB KING" GONE WRONG.

An irregular practitioner calling himself the "herb king" was recently arrested in a California town for practicing without a license, and inaugurated a not uncommon but peculiar defense. He had a number of his patrons, or those who signed as such, many of them of the sympathetic softer sex, publish a card in the local paper saying that they had received benefit from his treatment when regular physicians had failed to relieve them, and that some of the signers owed their lives to his skill. They recommended his medicines, and alleged that his prosecution was wholly unwarranted. The sequel came a few days later, when he was again arrested and held in heavy bail for a criminal assault on one of his female patients, whether or not one of the signers or only one duped by their recommendation the record does not state. Such are the ways of the quack.

RADIUM AND CANCER.

The suggestion offered in our editorial some months ago[1] that the radium radiations would prove of value in malignant disease appears to have been realized. A cable press report from Vienna at the end of last week announced the radical cure by a series of exposures to the rays of the new metal radium of a patient 61 years of age who had long suffered from cancer of the upper lip which had finally invaded the palate and seemed hopeless of further relief. The report of the case which was under observation in Professor Gussenbauer's clinic for several years was read before a recent meeting of the Imperial Academy of Sciences at Vienna. Only a small portion of radium was employed, something less than a sixth of a grain of the bromid salt, which is the most powerful in its radio-activity of any of the salts of the metal yet prepared. The malignant growth, it is reported, gradually disappeared, and there has been a very favorable healing of the ugly sore which existed. At the same meeting a case of melanosarcoma, the form of malignant disease universally acknowledged to be the most fatal in its effects, was reported as having been cured by the same means. The physician in charge considered the prognosis of the affection so hopeless under the ordinary methods of treatment that he preferred to try the effect of the radium rays before having recourse even to simple surgical removal. The tumor completely disappeared, and there is good reason to think that the patient will escape the serious danger which always accompanies this form of malignant neoplasm, no matter how small it may be when first recognized. While authentic detailed reports of the above cases have not been received, the wonderful qualities of radium already recognized make one

1. THE JOURNAL A. M. A., xxxix, p. 846.

ready to accept the statements as facts. The great objection to the general use of the remedy is its scarcity and costliness, but, as above shown, a very minute quantity only is required. This new substance may yet play a very important part in our remedial armamentarium.

THE SPECIFIC TREATMENT OF HAY FEVER.

The recent work by Dunbar[1] on the cause and specific treatment of hay fever is bound to excite great interest among medical men. Dunbar seems to successfully show that the pollen of a great variety of cereals and grasses—rye, oats, wheat, corn, grasses—contain substances that in susceptible individuals, but only in the susceptible, produce the well-known phenomena of hay fever. And these pollens produce hay fever, no matter how or where or when introduced. The active substance is soluble in tears, saliva, nasal secretion and blood serum. Even the hypodermic injection in susceptible persons of the starch rodlets in the pollens mentioned has caused severe conjunctivitis, coryza, cough and asthmatic seizures. These results would seem to settle the cause of hay fever, although the nature of susceptibility or unsusceptibility remains as yet wholly obscure. Dunbar, then, undertook the production of a curative serum by following the principles of immunization. Animals were injected with pollen toxin and after prolonged injections an antitoxin developed in the serum. This antibody not only rendered pollen harmless when mixed with it in the test tube, but it also neutralized the effects of the pollen when introduced into the eye or nose shortly after the local application of the pollen.

So far this neutralization has been successfully done only in the early stages of the process, but the results certainly warrant the hope that a serum may be produced which shall have more extended therapeutic value. Apparently the pollen toxin in the different grasses is the same because one pollen may be neutralized by the antitoxin obtained from the injections of pollen of a different source. This work of Dunbar's is entitled to the confidence of physicians because of the standing of the author, an American who has risen to scientific eminence and the high position of director of the Hygienic Institute at Hamburg, and also because of the evident scientific and thorough character of the work itself, which has extended over a period of seven years. Further reports will be awaited with interest.

SUNSTROKE AND HEAT EXHAUSTION.

The two conditions of sunstroke and heat exhaustion, though occurring from similar or identical causes, are not the same. In heat exhaustion the temperature is only slightly elevated, and may be subnormal, while in sunstroke it is usually well above 103 degrees. Correspondingly, the skin is comparatively relaxed and cool in heat exhaustion, while it is hot and flushed in sunstroke. Unconsciousness and convulsions are rare in heat exhaustion, but are common in sunstroke. Corresponding to the condition of the temperature, the pulse in heat exhaustion is rapid, feeble and perhaps almost imperceptible, but in sunstroke, although it is rapid, and may be feeble, it may also be full. The pulse, therefore, can not in all cases give much assistance. If further evidence is necessary to establish a diagnosis, there may be the history of the patient having complained, in heat exhaustion, of suffering from intense heat, or if he is conscious—as is usually the case—he may himself describe his previous feelings. On the other hand, in sunstroke, the attack in most cases comes on suddenly, and the patient is apparently stricken down while suffering no inconvenience. When diagnosis is made the treatment, it is easily seen, differs in the following: In heat exhaustion the subnormal temperature must be raised to normal; in sunstroke the hyperpyrexia must be reduced. The patient suffering from heat exhaustion must be protected from drafts, have external heat applied and stimulants given. In sunstroke, the stronger and colder the draft, the better. The patient should be rubbed with ice, be given cold water enemas or ice packs, and other measures should be used to reduce the temperature. In sunstroke stimulants should never be given while the temperature remains high and the period of depression following the reaction has not arrived. In case of either affection the patient must be warned to resume work moderately, and only after sufficient time for convalescence. He must be further warned that he will be more liable to such attacks in the future. The pathology of the resulting condition has often been discussed, but whatever the exact injury may be, there often seems to be an irreparable lesion.

1. Deutsche Med. Wochenschr., 1903, xxix, p. 149.

A BETTER CONDITION OF MEDICAL AFFAIRS IN HOT SPRINGS, ARKANSAS.

By an act of the Arkansas legislature last winter the jurisdiction of Hot Springs Reservation was ceded by the State of Arkansas to the United States government. One result of this is that the regulation of the practice of medicine comes under the jurisdiction of the national government. The Secretary of the Interior has promulgated a new series of rules for conducting the Hot Springs, including provisions requiring all physicians prescribing and using the hot water to be registered, and a board of physicians has been appointed to pass on their qualifications. This is independent of the Arkansas State medical practice act. The practice of public touting for certain doctors which has been so much the custom in the past is to be abolished. The payment of any sum of money or anything of value by any bath-house keeper, manager, clerk or attendant as a compensation for drumming customers or such practice by drumming doctors is forbidden. On violation of the rule water may be shut off, or the lease canceled, as the authorities may decide. Any solicitation of patronage by registered physicians will be ground for the cancelment or revocation of their licenses. In times past Hot Springs has been a sort of reproach to the medical profession by reason of the practices there in vogue, and it would seem that now under these new auspices this reproach is likely to be removed. Reputable and qualified physicians will find no difficulty in obtaining the United States license, and disreputable ones will have to take their field of activity somewhere else. It is to be hoped that they will find few places where they can establish themselves. It is said that up to quite recently some of the local physicians there have

been acting as if these rules did not affect them. They have hardly yet had time to be thoroughly effective, but we think the individuals alluded to will find that they have been playing with fire. It may be that the new rules will be attacked in the courts, but we have little fear of the outcome. The United States laws and regulations are usually fairly well supported by the United States Courts, and there are no precedents, so far as we know, especially in favor of the kind of quacks that have existed at Hot Springs in the past, or which would imply that they would receive any practical legal favor in the future. The reputable members of the medical profession at Hot Springs are rejoicing at the change.

Medical News.

CALIFORNIA.

Bard Hospital Incorporated.—The Elizabeth Bard Memorial Hospital, Ventura, has been incorporated with a capital stock of $40,000.

The Last of the Epidemic.—The sixteenth death in the epidemic of typhoid fever at Leland Stanford University, Palo Alto, occurred June 17, and the hospital, which had been in use for two months, is now closed.

One More Plague Case.—The ninety-fifth officially recorded case of bubonic plague at San Francisco was reported June 5, and the diagnosis confirmed by autopsy on the following day. There had been no case recorded since March 17.

Personal.—Dr. and Mrs. Fisher R. Clarke, Stockton, celebrated their silver wedding anniversary, June 6.——Dr. Francis M. Bruner has been elected chairman of the Santa Ana Board of Health, and Dr. John G. Berneike, health officer.

Graduation.—The University of Southern California, Los Angeles, graduated a class of 25 from its medical department June 11. The bishop of Los Angeles, Rt. Rev. Joseph H. Johnson, delivered the address of the evening, and the president of the university conferred the degrees.

GEORGIA.

Medical Scholarships Awarded.—The governor has named four men from the state at large and two from each congressional district as beneficiary students of the Medical College of Georgia, Augusta.

Personal.—Dr. W. Sterling Wilkinson, Augusta, is said to have completed a fast of 53 days, June 28, whereby he cured a dyspepsia of many years' standing.——Dr. Herring Winship has been appointed junior surgeon at the Macon Hospital.

Addition to Faculty.—Seven lectureships have recently been established at the Medical College of Georgia, Augusta, which have been assigned as follows: Dr. William H. Goodrich, genito-urinary diseases; Dr. W. Clifton Lyle, forensic medicine and hygiene; Dr. William Z. Holliday, diseases of children; Dr. W. C. Kellogg, diseases of the skin; Dr. W. R. Houston, nervous diseases; Dr. Andrew J. Kilpatrick, minor surgery and bandaging, and Dr. Henry M. Michel, orthopedic surgery.

ILLINOIS.

New Building for State Hospital.—The contract has been let for a new building at the Illinois Western Hospital for the Insane, Watertown, to be constructed at a cost of $101,900. The new building will add 400 to the capacity of the institution, making a total capacity of 1,200.

Physician Gives Estate to College.—By the will of Dr. Hiram K. Jones, whose death occurred June 16, his entire estate, valued at about $75,000, with the exception of a few legacies to be paid therefrom, was bequeathed to Illinois College, Jacksonville, with which he was connected for many years.

Personal.—Dr. Carey Culbertson and wife, Piper City, prior to their departure for Europe, were given a reception, at which a handsome steamer rug was presented to them. Their objective point is Vienna.——Dr. Lewis C. Taylor, Springfield, has been appointed assistant surgeon-general, with the rank of lieutenant colonel, and has been assigned to the newly-organized Fourth Brigade.

Warning.—A correspondent in Lewistown, Fulton County, warns against Dr. A. A. Potterf, an advertising itinerant, who has been making much money from the people of that section by advertising to cure all diseases free. He was fined $100 and costs for violation of the medical practice act, but escaped without payment of the fine. The sheriff of Fulton County would be glad to receive information as to the whereabouts of this individual.

Chicago.

Hot Weather Kills.—The week ended July 4 showed the result of the sudden onset of hot weather, as 563 deaths were recorded, an increase of 109 over the preceding week, or about 24 per cent.

Hospitals To Be Given Permits.—The corporation counsel has advised Health Commissioner Reynolds to issue licenses to general hospitals, even though neighboring property owners should object, serve written notice on the mayor and commissioner, and threaten suit for damages.

Pure Milk Plant Opened.—The milk-pasteurizing plant of the Children's Hospital Society, established through the munificence of Mr. and Mrs. Nathan Strauss of New York City, was opened for the summer on July 1. The milk will be supplied at less than cost, from sixteen substations situated in the more congested centers of population of the city.

Commencements.—Jenner Medical College held its graduating exercises June 30. Dr. G. Frank Lydston delivered the doctorate address on "The Young Man's Way to Success."—— Harvey Medical College graduated a class of 20 on June 27. Dr. Frederick D. Marshall presided and Carl Svante Nicanor Hallberg, Ph.G., on whom was conferred the honorary degree of Doctor of Medicine, delivered an address.

Endow Medical Journal.—The only endowed journal in the world devoted to the study of infectious diseases is to be published in Chicago. Commencing in the fall *The Journal of Infectious Diseases*, edited by Dr. Ludvig Hektoen and Prof. Edward O. Jordan of the University of Chicago, will be issued. The expenses of the publication, which, it is estimated, will amount to $5,000 annually, will be met by Mr. and Mrs. Harold McCormick. This agreement is made for an indefinite term, and amounts practically to a $125,000 endowment.

Reduced Mortality.—The forecast of the Department of Health of May 23 has been fully verified, as shown by the following figures of successive weekly death rates since that date: May 30, 16.12; June 6, 12.73; 13th, 13.06; 20th, 12.48; 27th, 12.54. For the month of June the total 2,042 recorded deaths represent an annual mortality of 13.16 per 1,000—a decrease of more than one-fifth (21.1 per cent.) from the May, 1903, rate and of 6.8 per cent. from the average June rate of the previous ten years.

Alumni Week at Northwestern.—The exercises of alumni week at Northwestern University Medical School were attended by about 200 former graduates of the institution. Special clinics were held during the week, and for the banquet which had been planned in the Auditorium Hotel, an al fresco lunch with student waiters in the Physiological Laboratory was substituted on account of the strike of the waiters. Dr. Archibald Church was toastmaster, President James of the University welcomed the guests, and Hon. A. N. Waterman, Rev. I. A. White and Frederick Greeley spoke.

IOWA.

Revenue from Itinerants.—It is reported that the state of Iowa will receive in 1903 a revenue of nearly $20,000 from medicine pedlers at $100 a license.

Back from Europe.—Dr. Will L. Hearst, Cedar Falls, has returned after a year's absence in Europe.——Dr. Aram G. Hejinian and family of Anamosa have returned after a stay of eight months in Europe.

Hospital Opened.—The formal dedication and opening of Mercy Hospital, Council Bluffs, took place June 11. The hospital has cost about $75,000, and contains 113 rooms. In its appointments and equipment it is said to be unequaled in the state.

University Changes.—The following changes in the teaching staff of the College of Medicine of the University of Iowa are announced: Dr. Lawrence W. Littig, professor of theory and practice of medicine and clinical medicine, has resigned, and Dr. Walter L. Bierring has been elected to that chair; Dr. Henry Albert has been elected assistant professor of pathology and bacteriology.

Personal.—Dr. James G. McAlpin, Grundy Center, started for Europe July 1. He expects to study in Vienna, Paris and Edinburgh for a year.——Dr. Charles B. Adams, Sac City, has been elected president of the State Board of Medical Examiners, vice Dr. John A. McKlveen, Chariton.—Dr. John W. Harriman has been elected president of the staff of the University of Iowa Hospital, Iowa City, and Dr. Lee W. Dean, secretary.

KENTUCKY.

Damage Suit.—Dr. Cuthbert Thompson, Anchorage, recently received a verdict in his favor in a suit against him for $10,000. The suit was brought by a woman 76 years of age who had sustained a Colles fracture of the left forearm twenty-two months before.

Pioneer Physician Ill.—Dr. James M. Holloway, Louisville, is seriously ill as a result of a fall two weeks ago. It was at first thought that his skull was fractured, but it afterward proved that he had concussion of the brain. His advanced age, of course, makes his condition more serious.

Medical College Incorporated.—The Kentucky University Medical Department was recently incorporated with a capital stock of $45,000, by Drs. Joseph B. Marvin, Thomas C. Evans, James M. Holloway, J. Garland Sherrill, Samuel E. Woody, Henry E. Tuley, Louis Frank, Leon L. Solomon, and W. Ed Grant.

To Make Entrance Examinations More Rigid.—The Kentucky State Board of Health, at its June 10 meeting, passed the following preamble and resolutions:

WHEREAS, In violation of published requirements, many low-grade schools offer private inducements to medical students for admission, reduced time of attendance on lectures, scholarships and reduction of fees, to induce them to enter on the study of medicine to their own disadvantage, and contrary to the interests of humanity; be it

Resolved, That the State Board of Health of Kentucky will not recognize as reputable any medical college which violates its published requirements for admission, tuition and the time of attendance at the annual sessions, which requirements must be definitely expressed. The college shall require of each applicant for matriculation evidence of good moral character and a certain showing that he is a graduate of a recognized normal school, high school, academy or college of literature, science or arts, or a certificate from a county superintendent of public instruction showing that he has passed a satisfactory examination in the following branches: In English, composition, submitting a composition on some subject of general interest embracing not less than two hundred words, which shall be considered with reference to spelling, punctuation, thought and construction; in arithmetic, showing knowledge of decimal fractions, percentage and compound numbers; in algebra, simple equations; in Latin, first year of one ordinary Latin course; in physics, the elements of mechanics, hydrostatics, hydraulics, heat, optics and acoustics; or, in default of such certificate, he shall be examined in the above-named subjects by the superintendent of schools in the city in which the college is located and obtain and present his certificate.

No college shall offer or accept scholarships, or any reduction in fees, except as provided for and required under state laws, or under the laws of endowed universities.

No note accepted by any college in payment or part payment of fees, or any form of rebates will be recognized as complying with the above requirements, and no student shall be given credit for attendance on lectures, or for examination for advanced standing until all fees shall have been paid, nor shall the degree be conferred on anyone under other conditions.

Each student must have been in actual attendance for the full term in each of the four years required in the curriculum.

Each applicant graduating on and after July 15, 1903, shall make affidavit of compliance with the above requirements for each and every year after July 15, 1903.

MARYLAND.

Hot Weather Deaths.—The hot weather in Baltimore sent the deaths last week up to 262, 50 being of children under 5. The annual proportion was 24.68 per 1,000.

Medical Journal Declares Dividend.—The shareholders of the Maryland Medical Journal Company of Baltimore and Washington, at its annual meeting, June 19, declared a dividend and re-elected the old board of directors.

Bequests to Hospitals.—Minka Friedmann left by his will $500 to the Hebrew Hospital, and John Uhrig left $100 to the same institution.——Katharine Gibson by will left $1,000 to the University of Maryland Hospital toward the endowment of a bed in that institution.

Personal.—Dr. James A. Stevens, Oxford, has been elected state medical examiner by the Medical and Chirurgical Faculty of Maryland, vice Dr. Charles F. Davidson, Easton, who declined re-election.——Drs. A. D. McConachie, Frank D. Sanger and John Ruhräh, Baltimore, have sailed for Europe.——Dr. J. C. King, Salt Lake City, Utah, sailed from Baltimore for Bremen July 1, and Dr. W. J. Craigen, Cumberland, for Jamaica, on the same date.——Dr. William T. Howard has gone to the White Sulphur Springs, Va., for August, and will spend September at Narragansett Pier.

MICHIGAN.

Reported Epidemics.—Typhoid fever is reported to be epidemic at Escanaba, and diphtheria at Benton Harbor.

Michigan Falls in Line.—Michigan has adopted the American Medical Association resolutions concerning the examination of the eyes and ears of school children.

Accident to Physician.—Dr. Frank A. Grawn, Munising, while returning home after having made a call, was thrown from his bicycle into a barbed-wire fence, sustaining serious cuts and bruises.

Personal.—Dr. Allen D. McLean, Detroit, has passed the examination for the medical department of the U. S. Navy.——Dr. Jabez Perkins, Owosso, who has been a practitioner for more than half a century, was made an honorary member of the Michigan State Medical Society at its recent meeting.——Dr. Arthur D. Holmes, Detroit, for eleven years lecturer on pediatrics in the Michigan College of Medicine, has resigned.——Dr. Theodore F. Heavenrich, Detroit, has been elected medical director of the Port Huron Hospital and Home Association to succeed Dr. Hiram R. Mills, who has moved to Grand Rapids.——Dr. Elliott K. Herdman has been elected city physician of Ann Arbor.

Would Educate the People.—At the meeting of the State Board of Health, June 10, the following resolution was unanimously adopted:

Resolved, That the state board of health shall each year publish and transmit to boards of supervisors and local boards of health throughout the state the scientific and common names of diseases dangerous to the public health. Such lists shall contain the names of dangerous communicable diseases already existing in the state, or which, in the opinion of the state board of health, are liable to be present during the year following each publication. Diseases communicable from animals to man shall also be included in these lists. Accompanying the lists shall be brief statements of how each of the dangerous diseases is spread, and the proper steps to be taken for its restriction by local health boards and health officers at every outbreak of such disease.

MINNESOTA.

Newly Licensed.—Licenses were issued by the State Board of Medical Examiners, June 19, to 108 applicants who had successfully passed the examination.

Minnesota in Line.—The Minnesota State Medical Society has adopted the resolutions of the American Medical Association anent the examination of the eyes and ears of school children.

Smallpox Waxes.—The smallpox report of the State Board of Health for the week ended June 15 shows 143 new cases in the state, 55 of which were in Renville County. Only one death was reported.

Advisory Board for Consumption Sanatorium.—Governor Van Sant has appointed the following advisory board for the sanatorium for tuberculosis to be located near Walker: Drs. George B. Weiser, New Ulm; Alonzo P. Williamson, Minneapolis; James L. Camp, Brainerd; George S. Wattam, Warren, and H. Longstreet Taylor, St. Paul.

Commencements.—The College of Medicine and Surgery of the University of Minnesota graduated a class of 73 June 2. Dr. John M. Dodson, dean of the medical department of the University of Chicago, delivered the annual address on "The Relation of the University to Professional Schools, Medical and Otherwise."——The medical department of Hamline University held its graduating exercises June 1. A class of 34 received degrees, and Rev. Irving R. Johnson delivered the doctorate address.

MISSOURI.

Medical College Expands.—Barnes Medical College, St. Louis, has established pharmaceutical and dental departments.

Leaves Large Estate.—The will of the late Dr. Andrew L. Chapman, Kansas City, devises an estate valued at $260,000.

Resolutions Regarding Dr. Bryson.—The St. Louis Medical Society of Missouri, at a meeting held soon after the death of Dr. John P. Bryson, adopted resolutions eulogizing the character and attainments of its deceased member, and detailing his work as a physician, teacher and writer.

Hospital Appointments.—The health commissioner of St. Louis has appointed Dr. William J. Doyle assistant to the superintendent of the City Hospital, and Dr. C. P. Glahn senior assistant.——Dr. H. J. Sherk has been appointed chief dispensary physician by Health Commissioner Simon of St. Louis.

Many Graduate.—Barnes Medical College, St. Louis, graduated a class of 100; Marion-Sims-Beaumont Medical College, 96, and the St. Louis College of Physicians and Surgeons, 59;

University Medical College, Kansas City, conferred degrees on a class of 63, and Kansas City Medical College graduated a class of 24.

NEW YORK.

New York City.

Physician Beaten and Robbed.—Dr. Benjamin Hawker, a retired physician, was assaulted and badly beaten by two burglars in his house, 141 East 52d street.

Illegal Practitioner Fined.—Charles Sampsell, practicing as "Dr. E. D. Porter," was recently arrested on the charge of practicing medicine without a license, and was fined $50.

Personal.—Dr. William T. Bull sailed for Europe, June 27. ——Dr. Frank Hinkley, Brooklyn, has been appointed junior physician at the Manhattan State Hospital.——Dr. Luther Halsey Gulick, the director of physical training in the public schools of this city, has been elected president of the American Physical Education Association.

Charity Curtailed.—The well-known work of the floating hospital of St. John's Guild must be curtailed this summer because of lack of funds. The first trip of the floating hospital was made on July 7, but the service to Brooklyn will be entirely discontinued this year, and there will be an alternate service to the east and west sides of New York only.

Steals Doctor's Horse.—A blacksmith went to the stable where Dr. Guilford Allen keeps his horse, and succeeded in getting permission to take the animal out on the plea that he had been sent by the doctor to exercise it. He then took the horse to several stables, trying to effect a sale. He was arrested by a police captain while thus engaged.

Epidemics on Staten Island.—Measles and whooping cough are raging on Staten Island, or Richmond Borough. In one public school at Westerleigh as many as 75 per cent. of the pupils were ill with measles. The epidemic of whooping cough began at Tottenville about two weeks ago, and is spreading with such great rapidity that it is already to be found in almost every family in that place.

Woman an Ambulance Surgeon.—Considerable popular interest has been aroused by the fact that New York's first woman ambulance surgeon has begun active service. For the past six months Dr. Emily Dunning, a New Yorker, has been busy as a junior surgeon in the accident ward of Gouverneur Hospital, and on July 1 her service as ambulance surgeon began. With the exception of a "rainy day" skirt and the regulation ambulance surgeon cap she dresses as do other women, and seems to experience no special difficulty in attending to the arduous duties of her office.

Health Board and Sick Babies.—The health department announces its intention of inaugurating at once a crusade among the 50,000 babies born in the city in the past year. A corps of 43 physicians and 17 nurses will engage in this work, to facilitate which the city has been divided into 160 districts. The mothers are to be taught how to care for and feed their babies, and the nurses will assist in carrying out the directions of the physicians. No doubt the work will be pushed vigorously, but it seems hard to credit the published statement that this fostering is to be given indiscriminately to both rich and poor.

GENERAL.

No Room for Kokuas.—The Honolulu Board of Health at its meeting, June 17, decided that, on account of the crowded condition of the Lunalilo Home, it would be impossible to admit Kokuas from Molokai to that institution.

First American Plague Victim.—Mr. Frank Twombley, an American contractor of Manila, died on April 24 from bubonic plague. The diagnosis was confirmed by Major Edward Champe Carter, surgeon, U. S. Army, Commissioner of Public Health.

No Physicians for Postoffices.—Postmaster General Payne issued on order abolishing the position of physician in postoffices at the close of business June 30. The postoffices employing physicians are New York, Chicago, Brooklyn, Philadelphia, and Boston.

Jaro Hospital Completed.—Advices from Iloilo, P. I., under date of May 20, state that at that time the new hospital at Jaro was almost completed, and that several wards were already occupied. Drs. H. E. Winslow and L F. Raymond are in charge.

Physicians in Porto Rico.—In a letter from Dr. Wm. Fawcett Smith, secretary of the Superior Board of Health of Porto Rico, he says that it will be a kindness to prevent any physician from coming to Porto Rico under the existing conditions, and suggests that the publication of this notice may save serious loss and disappointment to physicians who had intended to settle in the island.

A Warning and a Request.—The Medicolegal Department of the Chicago Medical Society desires us to announce that a man who claims to be Dr. Theo. Jennings robbed the office of Dr. Dickey of Toledo, Ohio, last week. On Saturday evening Dr. Byron Robinson of Chicago cashed a check for him to which he had forged the name of Dr. Dickey. He is probably addicted to cocain. He is about five feet eight inches in height, about forty years old, is disheveled in appearance and very nervous in manner. Any physician knowing anything about him is asked to notify the Chicago detective department, or Dr. W. A. Evans, 103 State Street, Chicago.

Dr. Howard A. Kelly Abroad.—Dr. Kelly seems to be making an impression abroad judging by the notices in our exchanges. We quote from the *British Medical Journal* in regard to his visit to Glasgow: "The arrangements for the visit of Dr. Howard A. Kelly to Glasgow last week were carried through with great success. Dr. Kelly had been elected honorary president of the Glasgow Obstetrical and Gynecological Society, and in the Faculty Hall on the evening of June 17 he delivered his presidential address before a crowded audience of professional men and women. The subject was 'The History of Appendicitis in Great Britain,' and Dr. Kelly traced the development of our knowledge of appendicitis as a separate disease and its surgical treatment from the beginning of the nineteenth century, pointing out the important part Britain had played in that development. The address was interesting and racy, and was evidently meant as a compliment to British physicians and surgeons. Needless to say, it was enthusiastically received. On the afternoon of June 18 there was a combined meeting of the Glasgow and Edinburgh Obstetrical Societies, when a discussion took place on Extirpation of the Uterus and Its Appendages in Serious Pelvic Inflammation, Dr. Kelly introducing the discussion. In the evening of the same day Dr. Kelly was entertained at dinner in the Windsor Hotel. The president of the Glasgow society, Dr. Nigel Stark, occupied the chair and there was a large gathering, which included the leading members of the profession in both Glasgow and Edinburgh. In proposing 'The Health of Dr. Howard Kelly' the chairman paid a high tribute to his distinguished services to surgery, eulogizing the improvements he had inaugurated which had made his name famous all over the world. Dr. Kelly, in reply, thanked the Glasgow society for the great honor it had paid him by electing him its honorary president, and dwelt on the cordiality of the relationship that exists between Britain and the United States."

Referring to the address he delivered in French at Paris, before the Société de Chirurgie, the *Gazette Méd. de Paris* remarks: "Professor Kelly operates in the most splendid hospital in the world, in a marvelous university, and he possesses a private library almost as rich as that of the Institut de Bibliographie at Paris, while he is devoted to bibliography. His coming to Paris to address his French confrères in their own tongue on the Rôle of France in the History of Appendicitis, is a tour de force that very few members of the French society could return in kind, for very few know English, and still fewer are posted in regard to American bibliography."

The editorial concludes: "Certes, c'est là de la coquetterie, but it is piquant to see an American, the type of the active, practical man, disport among the old dusty tomes of the eighteenth century and the forgotten files of the first scientific periodicals, as much at home as a Roosevelt on the tops of the Rocky Mountains! There is no doubt about it, the future belongs to the United States. The Latins are dead, and Panama will give them the finishing stroke."

FOREIGN.

La Syphilis.—A new monthly has been founded at Paris with the above descriptive title. Dr. T. Barthélemy, 22 rue de Notre-Dame-de-Lorette, is to have editorial charge.

Sanatorium for the Madeira Islands.—The *Riforma Medica* states that Prince Carl von Hohenlohe has applied to the Portuguese government for permission to erect two extensive sanatoria on the Madeira islands. He agrees to construct two and have them ready in two years, one for the wealthy and one for the poor.

Sequel of the Larceny Case Against a Paris Physician.—Sentence has been suspended in the case of the young Paris physician who was condemned to six months' imprisonment on account of petty larceny to keep himself from starving. A

small town in the interior needed a physician, and he has removed there on the recommendation of other physicians, who know that he had done good work, as his thesis testified.

A Second Victim of the Laboratory Plague at Berlin.—All the persons who attended Dr. Milan Sachs during his illness were treated with preventive injections of antiplague serum, but one of them developed the disease. Possibly on account of the preventive injections, it had a very mild course and recovery was soon complete. The entire furnishings of the apartment where Dr. Sachs had lodged were taken to the disinfecting headquarters and burnt.

The Correspondent of the Paris "Semaine Medicale" Caught in the Kansas Floods.—In passing through Kansas City, June 3, Dr. Münch was stopped by the floods and was obliged to abandon his baggage containing all his memoranda and escape to the bluffs, as he writes. His letters are, therefore, suspended for the present. They have proved an interesting series of sketches, showing that we really gain in our own estimation when we see ourselves in certain respects as others see us.

Honors to the Late Professor Bottini.—The friends and pupils of the recently deceased Professor E. Bottini had planned a Festschrift in his honor with a gold medal and souvenir copy of his diploma on the occasion of his jubilee anniversary. The anniversary came soon after his death, and the University of Pavia was made the recipient of the honors in his name, the medal, diploma and Festschrift to be duly preserved among the archives of the institution with the list of subscribers.

Autoinoculation with Bovine Tuberculosis by Dr. Garnault of Paris.—Dr. Garnault's experiments on himself to refute Koch's assertions in regard to the non-identity of human and bovine tuberculosis, have resulted negatively, as we have previously reported. No general infection has followed and the local tubercles on the arm soon healed. No tubercle bacilli nor caseous tissue were found in them. Garnault is an athlete and possibly the experiments might have resulted differently on a less perfect physique, but as it is, our German exchanges either ignore his experience altogether or refer to it as resulting in a confirmation of Koch's statements, instead of a refutation.

Ankylostomiasis in the Westphalia Mines.—The *Allg. Med. Ct. Ztg.* states that it is reported from Bochum that a new source of infection has been recently discovered there. The parasites were found in large numbers in the eggs of hens which had access to fields fertilized with miners' dejecta. All the members of the scavenger's family, who were in the habit of eating eggs raw, were found to have the disease. The hens showed no symptoms of it, but investigation of the eggs revealed the larvæ in profusion. Our exchange adds that the case requires scientific confirmation, but states that according to the latest figures there are fully 25,000 cases of the disease in the Westphalia mines.

Death of Professor Gussenbauer.—Dr. Karl Gussenbauer, the eminent surgeon of Vienna, "Hofrath" and president of the University, died June 19, aged 61, after a brief illness due to a heart affection. He was the son of a country physician at Ober Vellach and was assistant to Billroth after graduating from the Vienna medical school. He became docent in 1874, and the year after was called to Liège as professor of surgery, and two years later to Prague, whence he was summoned to Vienna in 1894 as the successor to Billroth. The week before his death he went to Vöslau, accompanied by the dean of the medical faculty, to present the renewed medical diploma after fifty years to Professor Drasche on his silver jubilee.

Leprosy in the Danish West Indies.—Professor Ehlers was commissioned by the Danish government to study the conditions in regard to leprosy in the three Danish West Indies, St. Thomas, St. Croix and St. Jean. He has just handed in his report, which states that he found 102 cases of leprosy on the islands, and that the number is less than formerly. At the same time he proclaims that there are no adequate provisions, and that more stringent regulations are necessary to prevent immigration of lepers. He also pleads for the erection of a suitable leper asylum. He found the disease of a milder character than in more northern countries and states his opinion that this form is curable by proper treatment and care.

Declining Death Rate in Europe.—The German Bulletin of Vital Statistics states that the death rate in the German Empire has fallen from 26.8 per 1,000 during the decade 1841-1850, to 22.2 in the last decade. For comparison it gives the death rate for the same decades in other European countries: In Austria it has fallen from 32.8 to 26.6; France, 23.3 to 21.5; England and Wales, 22.4 to 18.2; Belgium, 24.4 to 19.1; Denmark, 20.4 to 17.4; Sweden, 20.6 to 16.3, and in Norway from 18.2 to 16.2. During the last decade the death rate in Switzerland was 19.4; in Italy, 24.7; in Hungary, 29.7 and in European Russia, 33.5. The *Deutsche Med. Wochft.* comments that the death rate is, therefore, highest in Hungary and Russia, but the birth rate in these countries is exceptionally high.

The Bufalini Prize.—The R. Istituto di Studj superiori at Florence, Italy, notifies us that the Bufalini prize of $1,200 is open to competition again. It is awarded every twentieth year, and all competing articles must be received by the chancellor of the medical department, Via degli Alfani, 33, before the end of October, 1904. They must be sealed and written in Italian. The theme is the value of the experimental method in opposition to the speculative or dogmatic method of scientific research. The first part of the article should deal with the subject at large, and in the second part the author must review the way in which the single sciences have followed this method during the last twenty years, and how they can be induced to a more faithful and complete observation of its principles. The prize may be divided, and the writer may limit his article to one of the parts alone.

Longest Survival in Accidents.—The Tarbé case is attracting much interest at Paris. This wealthy couple were found asphyxiated by carbonic oxid one morning from a defective flue. Brouardel and Ogier testified as medicolegal experts that it was impossible for them to determine positively which of the victims had succumbed first, but that the probabilities were in favor of the assumption that the husband had survived longest, as his cadaver was not so pale nor so cold as that of the wife. The spectators unanimously applied their efforts to resuscitate him, leaving the wife as past all aid. Lacassagne of Lyons, on the other hand, affirms that the medical presumption is in favor of the survival of the wife, citing among other reasons that the carbonic oxid might have been able to maintain the warmth and the coloring in the cadaver most profoundly intoxicated. The decision of the court has not yet been rendered.

The Question of Languages at International Congresses.—Professor Küster of Marburg is indignant because some of his compatriots at the Madrid Congress delivered their addresses in French or some other language, thus belying their national tongue. Professor Holländer of Berlin takes issue with him and thinks that some concession is necessary or the orator will find himself talking to empty benches, to say nothing of the courtesy of conciliating the members of other nationalities. He suggests in a letter to the *Deutsche Med. Wochft.*, as perhaps the best plan, that the communications should be made in the mother tongue of the speaker, followed by a brief summary in the language of the country where the congress is held. If this were adopted as a regular measure, he believes that it would prevent the choice of meeting places where Portuguese or a similar little known language is spoken. He remarks in parenthesis that as China and Japan have drawn their science so extensively from Germany, the German language would be understood at a scientific gathering there, and might thus be considered the home tongue of the national members.

Deaths Abroad.—Dr. R. Juergens, custodian of the Pathologic Institute at Berlin, died June 14, aged 60. For thirty years he was Virchow's trusted assistant and had received the titles of docent and professor, his work being principally in the line of the post-graduate or vacation courses. His contributions to pathologic anatomy are numerous, among them a new reaction for amyloid degeneration.——The death is also reported of Dr. Karl Gegenbauer, formerly professor of anatomy at Heidelberg. His seventieth birthday was celebrated with much ceremony by his friends seven years ago, when his works on comparative anatomy were scheduled in full. ——From Paris is announced the death of Dr. Gerard Marchant, following close upon that of Dreyfus-Brisac and of Boilly, all eminent surgeons in the prime of life. Marchant was born at Toulouse in 1850 of a medical family; during his interne service he suffered from diphtheria, and later from appendicitis, one leaving paralysis for a year and the other requiring months of convalescence. The surgical service at the Boucicault hospital in his charge was a model in every respect, and from it have issued numerous memoirs on surgical subjects from his pen or those of his pupils. His latest works were on "Recto-coccy-pexie" and "Hépato-pexie."

Warning Against Quacks in Germany.—The authorities of Berlin and its province are publishing the following cir-

cular of warning for the public, drawn up by a committee appointed by the Berlin Medical Chamber: "While physicians thoroughly trained and approved by the state disdain to advertise their services, there are numbers of other persons who have no training or special knowledge who yet seek to delude the suffering public by advertising in the papers, or distributing circulars or by worthless books in the hands of agents, assuming false titles, making baseless promises and publishing forged or bought or fraudulent testimonials. The immense sums paid out for this advertising demonstrate the large profits that are made out of this business. During the eight years ending 1897 there were 177 criminal suits against these charlatans on account of severe injury or death from their practices, and the total resulting imprisonment amounted to 63 years, 3 months and one day. The legislature assumes that the public is enlightened enough to protect itself against such swindling speculation on the credulity of the sick. The public should apply the ordinary prudence customary in business transactions to matters affecting health and even life itself! The title of physician alone guarantees that the bearer has been found fully qualified by the state. All other titles should be regarded with mistrust. All published testimonials should likewise be mistrusted unless the person signing the testimonial is personally known and personal inquiry has been made."

Organization of the Rising Generation of Medical Men in Austria.—The medical profession in Austria is not well organized and the attempt to hold a general meeting this spring to discuss economic questions failed principally on account of race jealousies and prejudices. The rising generation, however, appreciates the necessity for organization and the benefits that may accrue from it. The medical students and internes throughout Hungary and Austria had certain grievances and wished for improved facilities and opportunities. After due deliberation they held a large representative and harmonious meeting at Vienna, June 7 to 10, which was marked by moderation and business-like methods. A number of physicians and professors took part in the proceedings, and the president of the Vienna Medical Chamber, Dr. Heim, remarked in greeting the congress, that the fact that the medical students had aimed at comprehensive organization had caused the medical profession at large great satisfaction and aroused sincere rejoicings and profound sympathy, "but at the same time," he continued, "we can not repress a sentiment of sorrow when we see that the years of student life which used to be so free from care and responsibility, are now filled with concern to better the material conditions of the coming years. It is a struggle for existence of the bitterest kind for which the medical student is preparing, and it must find young and old firmly united in order that the aims sought may be realized." This "Mediziner-Congress" has evidently made a great impression, both on the authorities and on the general public. The resolutions adopted asked for numerous reforms, some of them still unrealized in any country, but the majority merely correspond to the measures in vogue in other lands. The minister of public instruction in an unofficial interview stated that he would appoint a committee of experts to consider the resolutions when they were formally presented, and would strive in every way to comply with the demands of the congress.

Campaign Against Charlatans in Germany.—The German imperial government has notified the various state authorities that more energetic measures must be taken against quacks. The official circular states that the number of charlatans has enormously increased during the last decades, and quack practices have assumed such proportions as to become a serious menace to the public welfare, equally detrimental to the interests of the public and to those of the medical profession. The circular reviews the various measures that have been enforced in Prussia, registration of unqualified, so-called healers, the prohibition of extravagant promises to cure and prosecution of charlatans for illegal practices, and remarks that these measures have not proved an effectual check. Consequently, it is proposed, in the interests of the public, to confer further powers on the local authorities to enable them to put an end to such practices in future, at least in the cases in which the charlatans have already done injury to the life or health of the patients who have applied to them, and in those cases in which from the antecedents of the charlatan or his personality, attempts to fleece the public may be feared. In such cases the local authorities are empowered to prohibit the quack from practicing further. The law against fraud in business is to be extended to cover illegal practice of the healing art. The official circular is quoted in full in all our German exchanges as an important advance in the campaign against charlatans which the medical profession has been waging. A cable report states that these professed curers will be given a month to secure other employment, after which time they will be prosecuted if they persist in practice. One newspaper correspondent cables that the government is in possession of statistics which show that more than 100,000 men and women are illegally practicing medicine and the art of healing in Germany, and that this number is rapidly increasing. One medical statistician says he has found 150 cases of cancer in his province. Of these 25 are attended by authorized physicians and 108 by quacks. He maintains it is nearly as bad in other diseases which particularly call for trained medical aid. Most of these quacks allege that they have occult powers, personal magnetism, "magnetic eyes and hands," and that a cure will be the immediate consequence of implicit reliance on this treatment. In some of the large cities of Saxony, Dresden, Leipsic and Chemnitz, it is not unusual for an ignorant quack to receive from $1,500 to $2,000 a year, an income beyond the average earnings of the scientifically equipped medical man throughout Germany. Attention is also directed to the number of women quacks who profess to have magnetic powers. In Saxony alone there are several hundred, and among their patients are some of the proudest names in the land.

LONDON LETTER.

The Investigation of Tropical Diseases.

A parliamentary report containing "papers relating to the investigation of malaria and other tropical diseases and the establishment of schools of tropical medicine" has been issued. It opens with a circular dispatch addressed by Mr. Chamberlain, the colonial secretary, to the governors of all British Colonies on May 28, in which the progress of malaria investigation and of the training of medical officers in the treatment and prevention of tropical diseases, is reviewed. Mr. Chamberlain says that the great mortality among Europeans in climates like those of the West African Colonies and Protectorates had attracted his notice from the first, and toward the end of 1897, largely through the interest taken in the matter by Dr. Manson, medical adviser of the Colonial Office, his attention was more definitely drawn to the importance of scientific inquiry into the causes of malaria, and of making provision for educating the medical officers of crown colonies in tropical medicine. In pursuance of the second of these objects it seemed advisable (1) that a special training school in tropical medicine should be established; (2) that the leading British medical schools should be induced to give greater prominence in their schemes of study to tropical medicine; (3) that the periodical medical report sent in from the tropical colonies and protectorates should be recast on one uniform type, designed to throw light on the prevailing tropical diseases. In February 1898, negotiations were opened by the Colonial Office with the Seamen's Hospital Society, with a view to obtaining accommodation for the proposed tropical school in their branch hospital at the Albert Docks. The school was opened, November, 1899, provision being forthwith made for the training of colonial medical officers, either there or in a similar excellently equipped school at Liverpool, which had been established shortly before. So far the school has just paid its way, and much valuable teaching work has been done. But increased accommodation, both for research and residential purposes, is greatly needed, and Mr. Chamberlain anticipates that a sum of $60,000 will be required to cover the cost of the new buildings. In July, 1898, Mr. Chamberlain invited the co-operation of the Royal Society in equipping a scientific investigation on the spot into tropical diseases, particularly in such deadly forms as the malarial and blackwater fevers prevalent on the West African coast. A joint committee was appointed, and the experts selected for the work—Dr. Daniels of British Guiana, Dr. Stephens, and Dr. Christophers of University College, Liverpool—began their investigations. On the West Coast of Africa they studied the distribution and natural history of several species of anopheles. They made the most important discovery (made independently at the same time by Koch) that while the native adults are immune to malaria the disease is prevalent in native children. They showed that the native is a prime agent in the infection of Europeans, and that the segregation of the white man from the native is important. They proceeded to India, where they found that the native children also harbor, but to a less extent, malarial parasites. They showed that the percentage of native children infected may be taken as the index of the prevalence of malaria in the district and that there is a connection between this index and the presence or nearness of the breeding places

of the offending anopheles. Blackwater fever, their observations have led them to conclude, is essentially of malarial origin. Though with the onset of an attack the organisms disappear from the blood they leave distinctive traces in the corpuscles. The occurrence of blackwater fever coincides with high malarial endemicity.

Fatal Tracheal Compression by Enlarged Thyroid in the New-Born.

At the Edinburgh Obstetrical Society Dr. Angus Macdonald described a case of this rare condition. An infant was born at eight months, ten minutes before the accoucheur arrived. He found the child in advanced asphyxia, but after performing artificial respiration the breathing was partly established. The thyroid was enlarged, its lateral lobes being of the size of a marble and of firm consistence. The breathing became more labored, the lower limbs being drawn in with each inspiration, and four hours after birth tracheotomy was performed, but death occurred during the operation. The thyroid was covered with a network of congested veins, and the lobes seemed to swell as the body was more cyanosed. Sir J. Y. Simpson has recorded the case of an infant who died eight hours after birth from pressure of a goiter as large as a hen's egg, which caused a forehead presentation. In 1855 Kieller recorded a case in which a large irregularly lobulated swelling in the region of the thyroid gland gave trouble by causing a forehead presentation. A. R. Simpson recorded in 1866 a case in which an enlarged thyroid caused dyspnea and dysphagia, but at the age or 4 years it was shrunken, and the child appeared healthy. In Dr. Macdonald's case neither parent suffered from thyroid enlargement.

Chorion Epithelioma.

At the Obstetrical Society Dr. Teacher (Glasgow) read an important paper on chorion epithelioma and the occurrence of chorion epitheliomatous and hydatidiform mole-like structures in teratomata. With the aid of drawings and photographs of microscopic preparations he discussed and illustrated the nature and origin of chorion epithelioma and its relations to the placenta, hydatidiform mole and certain tumors which were not related to pregnancy, but showed the same histologic characters. His conclusions were as follows: (1) The so-called deciduoma malignum arises in connection with pregnancy from the chorionic epithelium (or its forerunner the trophoblast) which is of fetal epiblastic origin. (2) These tumors form a characteristic group clinically, pathologically and developmentally, and should be classed neither as sarcomata or carcinomata, but as a distinct group *sui generis*. The most appropriate name is chorion epithelioma. Malignant hydatidiform mole may be treated as a variety of the disease. (3) Tumors containing precisely similar structures as those that develop from pregnancy may occur in other parts than the uterus and in both sexes. Probably they are teratomata arising from some structure with the morphological value of an included ovum and the chorion-epitheliomatous tissues represent the actual trophoblast of the included ovum.

Correspondence.

A Year's Experience in Organization in Michigan.

DETROIT, MICH., June 20, 1903.

To the Editor:—It is characteristic of the American to demand the test of experience ere accepting the dicta of science. Medical sociology affirms certain propositions relative to medical organization, but their acceptance is delayed for lack of experimental proof. As a contribution to this proof is the experience of Michigan during the past year. This experience began with the annual meeting, June, 1902, at Port Huron. Then, as a result of an exhaustive study of the situation, past, present and future, the Michigan State Medical Society unanimously adopted a new constitution and by-laws, in accord with modern methods. Officers were elected to carry out the details of the change. Some of the results may be catalogued thus:

The meeting of 1902 adjourned with a paid-up membership of about five hundred; eleven months later with seventeen hundred and twelve. June, 1902, it had no branches and scarcely half a dozen live county societies; June, 1903, it had fifty-eight branches, including seventy-eight out of eighty-three counties in the entire state; June, 1902, it had a cash balance of six hundred dollars; June, 1903, it had a balance of above one thousand dollars; June, 1902, forces of repulsion dominated the profession in Michigan; June, 1903, forces of attraction were everywhere in ascendancy; June, 1902, the study of scientific methods of organization awoke the hope that the Michigan profession might assume a place of beneficent influence worthy of the great state of which it was a part; June, 1903, found every member proud of past achievement in a work remarkable for its rapidity and thoroughness. June, 1902, two hundred and fourteen members were present at the meeting; June, 1903, this number had increased to five hundred and sixty-two. June, 1902, much time was consumed, and annoyance experienced, by the necessity of applicants for admission being passed on by a committee; June, 1903, all members on the list of the branches were at once given a membership badge—a minute only being consumed and no irritation. In June, 1902, the society did all its business in general session; June, 1903, the business was divided thus: the council looked after finance, publication, organization, and judicial matters; the house of delegates dealt with all legislative matters, and elected all officers, except president, decided on the next place of meeting, etc., while the immense general body elected the president, listened to addresses, engaged in scientific work and social fellowship. The confusion and turmoil of former years was abandoned in favor of a system which accomplished the objects of the meeting, in a manner perfectly equitable to every branch, after the fashion of a scientific organization. Naught occurred to darken the face, or disturb the heart of any member—*per contra* smiles and good cheer brightened the assemblage all the days. In June, 1902, doubt and anxiety prevailed; June, 1903, evident results filled all with hope for the future. Experience had proved the Michigan organization a success.

Previous observations rendered it improbable that officers could be found who would give of their time, energy, thought, money and sacrifice of private business with liberality adequate for the needs of the situation, but Michigan's experience shows that a president, vice-presidents, twelve councilors, with a secretary and treasurer, were found who failed not when the work was before them. As the society had no funds to pay their expenses, they individually met them, beyond the stipend of twenty-five dollars each to the councilors, nothing to president or vice-presidents, and naught extra to secretary or treasurer.

Not only did each councilor do his own work, but freely responded to the calls of brother councilors. The president always went wherever asked, as did the secretary, both rendering invaluable service. Thus Michigan had a corps of self-sacrificing men in the field from start to finish—so may any other state.

Most essential in this work is personal teaching—one who has learned and believed in organization carried it to those who had not learned or did not believe. The short cut of circular or journal article will fail either to organize or maintain such societies. To not a few was it a revelation to observe so many men, without hope of personal gain, toiling through Michigan, during an entire year, in organizing branches to the state society—but the fact gained hosts of adherents.

In general the officers were directed to do two things: (1) to make the society as valuable as possible, and (2) carry a knowledge of this to every physician in Michigan, with such persuasive power as to induce him to become an active member of his branch of the state society. To the utmost limit were they to make it more profitable and pleasant for each doctor to be in than outside the society. Actual results measure their extraordinary success.

It must not be supposed that no difficulties disturbed the work of organization, but in every case a fair hearing and full comprehension of the proposition won adherents. So universal was this experience of the councilors that they are sanguine of similar success in the future.

Most wholesome was the lesson to individuals, that unless members of a branch they could have no part in the meetings of other branches in the state society or the American Medical Association. To gain these relations not a few joined their branch society. To be thus supported by the larger bodies has been a pillar of strength to the branches.

The leaders in Michigan organization well understand their work has only begun; that physicians must be persuaded to work in their local branches, and those already therein encouraged to work out their own development, that of their branch, and the state society. The officers of the branches have this work primarily in charge. If they fail it is for the councilor, by such means as seem wisest in each case, to awaken interest and stimulate effort. In fact, one great problem before the councilor is to find the best method of securing and keeping the highest activity of the branches.

Should the councilor fail, his vice-president steps in to awaken him to duty. If he too fails, the president exercises his natural prerogative and stirs each to the desired activity. In Michigan it is expected that the president shall personally visit as many of the branches as possible, make a speech, read a paper, or hold a clinic, and in general use his office to increase the activity of the branches. Our late president set the pace for his successors in this direction.

Experience taught the councilor, when striving to organize or vivify a branch, that success followed a diversion from local quarrels and disputes to broader and larger questions affecting state or national interests. Fired with a larger thought, personal interests quietly dropped into their natural relationships. By such a method the writer has often seen a discordant group transformed, within an hour, into a smiling band of co-workers, ready to do and dare for the larger idea, that which its success demanded. In fact, the largest returns from organization spring directly from this law—as the organizers go out of themselves to help others their true selves come into view—selves that make for all that is best in the profession, in manhood and citizenship.

The council's report showed that last September it started a journal, under the management of the secretary-editor, which had succeeded beyond expectations, in awakening and continuing interest among the branches, and its future looks very promising. The same report showed that experience was teaching the council how to secure increasingly large returns from the funds at its disposal, and how to adjust the difficulties between individuals or branches for the common good.

Intelligent work, persistent and helpful to every physician in the state, is the secret of such success as has obtained in Michigan. To this end most of the officers of last year were re-elected, and the outcome demonstrates the wisdom of the act. The fundamental platform of modern organization is the selection of officers for their known fitness and ability, to serve, not as figureheads or little gods.

The power of seventeen hundred united physicians in Michigan, as compared with that of five hundred discordant ones, has indicated itself in many ways:

(1) It has given a self-confidence to the Michigan profession heretofore unfelt in its ability to help its members, the outside profession and the people. (2) It has spoken to the legislature and secured a more respectful answer, because it had votes, and because the chances were greater, that it expressed larger truth. (3) As six hundred members gathered in Detroit at its late meeting, the laity saw a vast concourse of physicians clearly trusting each other. It reasoned that if these learned men so evidently trust each other, we may trust them, so the people as rulers of the land had a lesson that the new profession, with modern organization, is certain to develop a profession in which "he that is greatest is servant of all."

LEARTUS CONNOR, A.B., M.D.,
Chairman Council Michigan State Medical Society.

The Demise of the "Philadelphia Medical Journal."

PHILADELPHIA, June 29, 1903.

To the Editor:—Certain inaccuracies in the statement made by the late editor-in-chief of the *Philadelphia Medical Journal*, in your issue for June 20, seem to need correction in order that the profession may be better able to point the moral which adorns this tale. I refer particularly to the words:

"Two and a half years ago the *Philadelphia Medical Journal* reached a crisis in its affairs which led to a change in editorial management. There were many prominent medical men in Philadelphia and elsewhere who were interested in keeping the journal alive; and in spite of the fact that its short career up to that time had been marked by threatening disaster (due largely to the opposing aims and temperaments of men who commanded its various departments), a determined effort was made to rehabilitate the journal and give it a new lease of life. At the same time, however, the command of its stock was allowed to remain in the hands of a few (and a very few) laymen."

It is true that the difficulty two and a half years ago was that of "opposing aims and temperaments," but these were the old division betwixt commercialism vs. ethics. It was this that culminated in the displacement of the editor by the commercial interests, in order (as was stated at the time), to install some one who might either be hoodwinked by them or who would be pliable to the demands of commercialism. The "impending disaster" was brought into existence solely as a reason to give for deposing an editor who refused to be subservient. These facts were made known to the late incumbent personally before he assumed the position of editor-in-chief, following my dismissal and the abrogation of the office of editor, and were also made known to the profession in general by a "protest" presented at the annual stockholders' meeting of the Philadelphia Medical Publishing Company, and thereafter sent to practically every physician in the United States and Canada. It will be remembered that this protest was directed chiefly against the condition outlined in the last sentence of the quotation from the communication of the late editor-in-chief—the placing of the absolute control of a medical journal in the hands of practically one stockholder, a layman.

Not a word or sign of dissent to the statements contained in that protest has ever been made, and this letter by the recent editor-in-chief is an unexpected confirmation of their absolute truth, and reveals the rapid degeneration of the journal during the two and one-half years following. The disastrous conditions which have made the *Philadelphia Medical Journal* "practically dead in the city of its birth" have developed within the past three years. They could, however, never have prevailed had not the indifferent and apparently consenting attitude of a few physicians confirmed the commercial element in a belief that "professional ethics" existed only in the mind of the deposed editor, and that the profession would believe anything they pleased to say, if it was only said often enough and loud enough. Indifferent authors would help them by contributing their articles, indifferent physicians would send in subscriptions, and a mint of money could be made out of them and out of advertisers with the aid of subservient professional helpers! When my incumbency as editor was terminated, the journal (according to report of its business manager) had close on 12,000 subscribers. That these were gained through confidence in the editorial conduct of that journal was shown by the fact that *American Medicine*, which two and a half years ago took up the spirit and aims laid down by the *Philadelphia Medical Journal*, had 12,000 subscribers in less than nine months from its inception. Having faith in the existence of professional sentiment and recognizing that, if it could build a journal like the *Philadelphia Medical Journal* was two and a half years ago, it could also maintain it, and desiring to avert the blight of commercialism from so fair a property, I made a proposition to the board of directors prior to the final act of my dismissal, offering to lease the journal from them for any period of years they should name, assuming entire editorial and business charge and guaranteeing them as rental an annual payment of 5 per cent. on the then capital stock of $60,000. Under the conditions that then existed, with one journal in Philadelphia and with a different business management, this could have been done.

The communication of the late editor-in-chief is but a continuation of the story told in my "protest," and emphasizes the warning of the dangers of commercialism in medicine as much by what it leaves unsaid as by the degrading conditions it reveals. Those in the profession and those dependent on the profession may read their lessons, the one of the evils resulting

from the unfaith of commercialism, the other that ethical sentiment is growing, and that though commercial cunning may apparently prevail for a time, its portion will eventually be meted out to it. GEORGE M. GOULD.

Indian Method of Treating Measles.

OGDEN, UTAH, June 28, 1903.

To the Editor:—Speaking of the Indian and his improvised Turkish bath, and the observations of McClanahan and Judd, I beg to say that when I was connected with the Winnebago and Omaha agencies some years ago the Indians there improvised a Turkish bath exactly as described by Dr. Judd in THE JOURNAL of June 27. Dr. Judd queries whether the Indian would go into cold water after this hot bath if the water were available. That is exactly what they all did at the Omaha reservation. I remember an epidemic of measles in which I had little to do other than look on, for they had a Medicine Man of their own and were impatient of any interference from me or any one. The disease was confined principally to the papooses under 10 or 12 years old. They did very little till the trouble was well established, then the patient was carried into an already prepared tepee of hides, usually buffalo skins, where it was rolled in a heavy blanket and laid in a rudely-constructed cradle made of the limbs of trees. Rocks had already been heated and now water was poured over them. Prior to this, however, the Medicine Man was in evidence and I had been relegated. He first scraped the vertex of the caput with a horn or piece of glass, and when the spot was thin enough the shell of a small horn, usually that of a young buffalo, was placed thereon after the air had been exhausted, I do not remember how, something after the manner of a cupping glass. Then the Medicine Man, assisted by the gifted of the tribe, sought to exercise the evil spirit that had entered into the little victim. This was done by the beating of tom-toms and other added instruments, including the human voice, that made the succeeding days and nights ones of horror. The flaps of the tepees were pinned down tightly to the ground, and after a little the odor inside, coming from a combination of steam, hides, heat and Indian, would stop a clock. The "hospital" tepee was always pitched on the bank of a stream of water, and as these epidemics of measles always occurred in winter (I do not remember of one at any other season) the stream was therefore frozen over. While the heating was going on some were cutting a hole through the ice. At the proper time the now half-dead young Indian was brought out, his blanket removed, and he was plunged into the icy water, perspiration and all. In a few minutes he would be returned to the tepee and the process repeated. The above will seem to many almost incredible, but it is true. Another incredible thing is that the little papooses thus treated sometimes recovered. A. S. CONDON, M.D.

Protracted Anesthesia.

AMESBURY, MASS., June 28, 1903.

To the Editor:—The subject embraced in the above title is one that I have not seen discussed in medical journals. I have no desire to act the part of the carping critic in considering modern methods of surgery; I am quite ready to acknowledge the wonderful progress made by the masters of the knife in the last forty years. To an old-time military surgeon the present results in treatment of wounds seem little less than a miracle. I have spent many hours removing maggots from suppurating stumps after operations, so that the dry antiseptic dressing seems like a page from a fairy tale.

The old-time surgeon had certain qualifications for which he should be given credit. He was a rapid operator. Prior to ether and chloroform the length of time required for an operation weighed heavily in the scale of results. Shock was rated in proportion to the length of suffering.

In the opinion of the writer the modern surgeon is losing sight of possible shock by too deliberate methods. In a large hospital a few days ago I saw a patient wheeled into the operating room fully anesthetized. The surgeons were preparing their hands and donning their robes with no attempt at haste. The theory was that the patient was not suffering and consequently they could take their time.

Now ether is either an advantage medically considered or a disadvantage. If it is of real decided benefit to the patient then protracted anesthesia is all right. If it is not, then this laggardly waste of time is wrong, and we are not giving our patients the best possible chance.

The writer has been under the surgeon's knife five different times with an experience varying from a few minutes to five hours' anesthesia, and from a personal standpoint is confident that the strain on the nervous system, even under ether, is no insignificant matter. Personally, I would not like to have a patient of mine lose three minutes' time under ether waiting for a surgeon. H. G. LESLIE, M.D.

Reciprocity—A Suggestion.

SELMA, ALA., June 30, 1903.

To the Editor:—For some time I have noticed that you have been trying to perfect some system of reciprocity between the licensing boards of different states. The scheme which I propose, if it could be carried out, might help those who have stood an examination in one state in getting a license in another. Should a physician practicing in one state wish to move to another he might be given the choice of standing the examination of the state into which he moves or be allowed to show his examination papers of the state in which he had already practiced; if these papers conform to the standard of the state into which he moves at the time of the examination he to be given a license in this state.

A recent graduate might make a very fine showing before one board, but should he try an examination in another state some five or six years later, though he knew considerably more than a man fresh from college, he would not be able to make as good a percentage. This manner of getting a license in another state without standing the examination is defective in that it applies to only those who have stood a written examination before an examining board. H. D. FURNISS.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

PRESCRIBING WHISKEY.

SHREVE, OHIO, June 26, 1903.

To the Editor:—Is it lawful for a physician to prescribe whiskey for a patient, then dispense the whiskey, charging the patient the retail price of the whiskey, but making no other charges, i. e., for professional services? N. E.

ANS.—A physician who would do this would be simply a dram seller and should take out a government and local license.

Book Notice.

THE PRACTICAL APPLICATION OF THE ROENTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS. By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; and Eugene W. Caldwell, B.S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York. Cloth. Pp. 591. With 180 Illustrations, Nearly all Clinical. Price, $4.50 net. Philadelphia: W. B. Saunders & Co. 1903.

This volume is practically two books, one being devoted to *x*-rays as a diagnostic and the other as a therapeutic agent. Part one is written by Director Caldwell of the Gibbs *X*-ray Laboratory of New York, a man thoroughly competent, through practical experience, to write on the subject assigned him. In an introductory chapter is given a brief review of the experimental work which led up to the discovery of *x*-rays, then follow a description of the apparatus used, one chaptar being devoted to the Essentials of an *X*-ray Outfit, another to *X*-ray Tubes, one to Induction Coils, Interrupters and Their Management, one each to Static Machines and Their Management, to Fluoroscopy, to Photographic Materials and Their Manipulation, and sources from which the electric current may be obtained.

The chapter on Radiography is a most important and valuable one. In it are given in detail practical suggestions for

radiography, including specific directions for making radiographs of every part of the body. In the chapter on *x*-ray tubes is a description of the different tubes in use, the advantages and disadvantages of the several patterns and makes. In it are mentioned and described the tubes requisite for special work, such as for the rectum, vagina, throat, etc. Besides the ordinary drawings, this chapter is illustrated with several full-page illustrations, showing in colors the appearance of tubes under various conditions. In the chapter on Photographic Materials are considered developers and developing fixing plates, printing, etc. In the last chapter of part one will be found sensible and helpful suggestions regarding the choice of an *x*-ray outfit. In brief, part one is a concisely written description of the various appliances needed in an outfit for *x*-ray work, how to use and how to take care of them. The subject is presented in a manner sufficiently elementary to satisfy even those who have but little knowledge of electricity.

In the second part, which occupies about two-thirds of the book, is given a résumé of the literature already accumulated on *x*-rays as a therapeutic agent. In discussing the effects of *X*-rays on Tissues, the Histologic Changes Produced in Tissues by the *X*-rays, the Effects of *X*-rays on Bacteria, and the Causes of the Phenomena Observed in Tissues After Exposure to *X*-rays—the headings of the first four chapters—Pusey has reviewed and analyzed the experimental work, observations and conclusions of American and foreign workers bearing on these subjects, including, of course, his own work. In the chapter on the Technic of *X*-ray Exposures for Therapeutic Purposes, besides his own, he gives the methods of such Europeans as Kienböck, Scholtz, Oudin, and Schiff and Freund, and of such Americans as Williams and Beck. He gives in detail the technic of the application of the *x*-rays to the treatment of diseased conditions, covering all points not given in part one by Caldwell. The rest of the book is devoted to the treatment of diseased conditions under the following chapter headings: Treatment of *X*-ray Burns, Indications for the Therapeutic Use of *X*-rays, Affections of the Appendages of the Skin, Inflammatory Diseases of the Skin, Tuberculosis and Similar Diseases, Cutaneous Carcinoma, Carcinoma of the Breast and in the Thorax, Deep-seated Carcinoma, Sarcoma and Other Granulomata, the Prophylactic Use of *X*-rays After Operations for Malignant Diseases and Pseudo-leukemia and Various Other Affections. In these chapters are given in brief the results obtained by the use of the *x*-ray by others and their views as to the efficacy or otherwise of the agent in all conditions in which it has been used or for which it has been recommended. The author gives his own experience and results in detail, accompanied by reports of cases. In quoting others, the author does not hesitate to oppose the position held by them, but in doing so he gives the reasons for his opposition, and not with dogmatic statements.

The position taken by the author regarding the value of the *x*-rays as a therapeutic agent is a conservative one; while its wonderful effectiveness is recognized, its limitations are also appreciated. In considering the possibilities of *x*-ray treatment in tuberculosis of the lungs, he says: "It certainly does not hold out sufficient hopes of relief to warrant its use at the expense of residence in a bad climate, or abandonment of better tried measures." As to syphilis: "There is certainly no reason to substitute *x*-rays for the efficient method of treating these lesions that we already have." These are samples of the conservative statements that occur quite often. The book as a whole can be recommended as being one of the best and most practical thus far published on the *x*-ray as a diagnostic and therapeutic agent in that it contains a sufficiently detailed description of the apparatus used, the technic, a concise and critical review of the experience and opinions of those who have used it, and a conservative statement of its possibilities and limitations as a therapeutic agent in all conditions in which it has been used or suggested. It is a practical timely book that will be appreciated and welcomed by all who are engaged in *x*-ray work, as well as by those who are interested only indirectly.

Marriages.

GEORGE F. TOALSON, M.D., to Miss Lulu Wheeler, both of Mexico, Mo., June 16.

WILLIAM A. MCMILLAN, M.D., to Miss Ellinor Graham Owen, at Baltimore, June 24.

JOSEPH BRADY, M.D., to Miss Eugenie Brown, both of San Francisco, Cal., June 25.

JOHN L. CHESTER, M.D., to Miss Kathryn E. Butler, both of Emmett, Mich., June 16.

JOSEPH IRWIN FRANCE, M.D., to Mrs. Evalyn S. Tome, at Port Deposit, Md., June 24.

ARTHUR C. JOHNSON, M.D., Newark, Ill., to Miss May Dean of Monmouth, Ill., June 15.

THOMAS BOYD MORRIS, M.D., Atlantic, Iowa, to Miss Esther McLean of Joliet, Ill., May 1.

CHARLES ROBERSON, M.D., Greensboro, N. C., to Miss Mabel Hill, at Danville, Va., June 17.

FLOYD J. ROBERTS, M.D., Cando, N. D., to Miss Ruby Rutledge of Grand Forks, N. D., June 25.

HENRY S. DOWNING, M.D., Los Angeles, Cal., to Miss Elsie Clarke of Springfield, Ill., June 23.

HENRY P. BEIRNE, M.D., Quincy, Ill., to Miss Hildred Marie Jones of Milwaukee, Wis., June 23.

STACY HEMENWAY, M.D., Klamath, Ore., to Miss Irene Chitwood of Klamath Falls, Ore., June 4.

JAMES COALE SAPPINGTON, M.D., to Miss Claire Sappington, at Liberty, Frederick County, Md., June 24.

GRANVILLE N. RYAN, M.D., Des Moines, Iowa, to Miss Miriam Pickens of Louisville, Ky., June 10.

PHILIP VEILE JANSE, M.D., Luverne, Iowa, to Miss Margaret Belle Mason of Fort Madison, Iowa, June 23.

TORANA GROTHAUS, M.D., to JOHN DULIN, M.D., both of Sigourney, Iowa, at Iowa City, Iowa, June 17.

B. F. WALKER, M.D., Laton, Cal., to Miss Edith Alberta Crews of Riverdale, Cal., at Fresno, Cal., June 24.

WILLIAM HOLMES YEAKLEY, M.D., Davis, W. Va., to Miss Eleanor Straith Ranson, at Staunton, Va., June 17.

WILLIAM JEFFRIES CHEWNING, M.D., Fredericksburg, Va., to Miss Anne Page Meetze of Washington, D. C., June 17.

PAULETT CLARK, M.D., Lynchburg, Va., to Miss Fannie Yuille of Campbell County, Va., at Washington, D. C., June 16.

Deaths.

Ewing L. Thompson, M.D. New Orleans (La.) School of Medicine, 1861, of Dallas, Texas, surgeon in the Confederate service during the Civil War, died suddenly at Mineral Wells, Texas, June 17, from apoplexy, aged 62. The Dallas Medical and Surgical Association held a special meeting, June 18, to make arrangements for Dr. Thompson's funeral and to prepare resolutions of respect.

Stephen E. Robinson, M.D. Rush Medical College, Chicago, 1867, a member of the American Medical Association, ex-president of the Iowa State Medical Society; member of the International Association of Railway Surgeons, Iowa State Association of Railway Surgeons, Fayette County Medical Society, etc., died at his home in West Union, Iowa, June 7, aged 65.

Frederick A. Davis, M.D. Medical College of Alabama, Mobile, 1861, of Newport, Ky., who served throughout the Civil War as Surgeon, U. S. V., was for 16 years district physician, and for four years coroner of Campbell County, Ky., died at Shepard, Ohio, where he was under treatment for kidney disease, June 24, aged 66.

Nathaniel P. Washburn, M.D. New York University, 1891, of Stamford, Conn., who had been traveling for nearly ten years in search of health, visiting Saranac Lake, N. Y., Albuquerque, N. M., and Boulder, Colo., in his quest, died from tuberculosis, June 22, at San Antonio, Texas.

John H. Vincent, M.D. Michigan College of Medicine and Surgery, Detroit, 1902, of Red Ridge, Mich., on June 18, while responding to an urgent professional call, was thrown from his horse, sustaining a fracture of the base of the skull, from which he died two days later.

Walter F. Blunt, M.D. Galveston (Texas) Medical College, 1874, for twenty-five years state health officer, who bore a

spotless record in quarantine service of Texas, died, June 24, at Lockhart, Texas, from Bright's disease, after a long illness.

Carl Schwalbe, M.D. University of Bonn, Germany, 1862, a member of the American Medical Association, a surgeon in the German service during the Franco-Prussian War, died, June 14, at his home in Los Angeles, Cal., from tuberculosis, aged 65.

Stephen J. Dunn, M.D. Baltimore Medical College, 1896, of Springfield, Mass., a member of the Hampden District and Massachusetts medical societies, died at St. Francis' Hospital, Hartford, Conn., June 27, after an illness of two months.

Edwin A. Sailor, M.D. University of Iowa, Iowa City, 1901, Clarence, Iowa, formerly assistant physician at the Clarinda State Hospital for the Insane, died from typhoid fever at a hospital in Iowa City, June 22, aged 30.

Hans H. Littlefield, M.D., 1887, for many years a member of the American Medical Association, died at his home in Beardstown, Ill., June 26, aged 79. He served two years as a surgeon of volunteers during the Civil War.

William S. Wolfe, M.D. Jefferson Medical College, Philadelphia, 1897, of Fleetwood, Pa., died from tuberculosis, June 12, while on his way home from New Mexico, where he had gone eight months before for his health.

Sumner Pixley, M.D. Philadelphia Medical School, surgeon of the 110th Ohio Volunteer Infantry in the Civil War, died at his home in Peninsula, Ohio, June 12, aged 87. He retired from active practice in 1890.

William L. Towndrow, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1856, of Snohomish, Wash., a surgeon in the Civil War, died at the City Hospital, Everett, Wash., June 11, from diabetes, aged 80.

James Calderwood, M.D. University of Cincinnati, 1870, of Steele, Ind., died at the home of his father in Blue Creek township, May 31, from stomach trouble, after an illness of a week, aged 64.

Charles Legg, M.D., formerly of Stringtown, German township, Richland County, Ill., died at the Illinois Southern Hospital for the Insane, Anna, June 14, after a long illness, aged 78.

J. D. Vinton, M.D. Philadelphia University of Medicine and Surgery, 1854, of Kimberton, Pa., died at the Phoenix Hospital, West Chester, Pa. June 14, after a long illness, aged 74.

Thomas W. Hewitt, M.D. Louisville Medical College, 1861, surgeon U. S. Army, retired, died at his home in San Antonio, Texas, June 21, from congestion of the brain, aged 64.

H. Cloud Rainwater, M.D. Tulane University, New Orleans, 1891, died at his home in Morrillton, Ark., June 7, from consumption, after an illness of two years.

Charles W. Shaw, M.D. Ohio Medical University, Columbus, 1898, of Madison Mills, Ohio, died at his former home, near Logan, June 2, from Bright's disease.

Alonzo Shaffer, M.D. University of Pennsylvania, Philadelphia, 1895, died at his home in Essex, Conn., June 26, after an illness of two months, aged 32.

Louis Goeschel, M.D. Chicago Homeopathic College, 1878, died at his home in Mandan, N. D., June 17, from cancer of the tongue, aged 47.

Hubbard A. Foster, M.D. Harvard University Medical School, Boston, 1871, died suddenly at his home in Buffalo, N. Y., June 16, aged 53.

J. D. Mundy, M.D. Kentucky School of Medicine, Louisville, 1878, died at his home in Denver, N. C., June 25, after a lingering illness.

Benjamin F. Graves, M.D., died at his home in Hamline, W. Va., from typhoid fever, May 24, after a short illness, aged 25.

S. A. Taylor, M.D., of East Point, Ga., committed suicide while despondent, June 20, by shooting himself through the head.

Gilbert R. Woolsey, M.D. Hahnemann Medical College, Chicago, 1868, of Normal, Ill., died at Cambridge, Ill., June 7.

Henry K. Middleton, M.D. University of Louisville, 1871, died at his home in Kirksville, Ky., June 25, aged 59.

Louis R. Ford, M.D. Medical College of Georgia, Augusta, 1870, died at his home in Waynesboro, Ga., June 26.

Juan Jose Ramirez de Arellano, M.D., died at his home in the City of Mexico, from typhus fever, May 23.

D. H. Herrell, M.D., 1878, died at his home in Hanna City, Ill., June 22, aged about 60.

State Boards of Registration.

Minnesota.—The Minnesota State Board of Medical Examiners held their regular examination at St. Paul, June 2, 3 and 4, 1903. The results are reported by Dr. C. J. Ringnell, the secretary, as follows: Number of subjects examined, 12; total number of questions, 95; percentage required to pass, 75; total number examined, 129; passed, 111; failed, 18; the list of successful and unsuccessful applicants with their colleges and schools of practice is as follows:

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
2178	R.	University of Minnesota	1903	80.6
2179	R.	University of Minnesota	1903	86
2180	R.	University of Minnesota	1903	86.9
2186	R.	University of Minnesota	1903	81.4
2187	R.	University of Minnesota	1903	85.6
2190	R.	University of Minnesota	1903	82
2191	R.	University of Minnesota	1903	82.1
2193	H.	University of Minnesota	1903	84.5
2194	H.	University of Minnesota	1903	82.7
2200	R.	University of Minnesota	1903	83.9
2201	R.	University of Minnesota	1903	84.9
2202	R.	University of Minnesota	1903	78
2208	R.	University of Minnesota	1903	83.1
2209	R.	University of Minnesota	1903	85.1
2210	R.	University of Minnesota	1903	79.9
2214	R.	University of Minnesota	1903	79.5
2215	R.	University of Minnesota	1903	86.2
2216	R.	University of Minnesota	1903	83
2217	R.	University of Minnesota	1903	84.5
2219	R.	University of Minnesota	1903	81
2220	R.	University of Minnesota	1903	77.9
2225	R.	University of Minnesota	1903	83.3
2226	R.	University of Minnesota	1903	80.9
2227	R.	University of Minnesota	1903	85.1
2245	R.	University of Minnesota	1903	76.8
2246	R.	University of Minnesota	1903	88.6
2247	R.	University of Minnesota	1903	84.2
2249	R.	University of Minnesota	1903	82.3
2250	R.	University of Minnesota	1903	86
2251	R.	University of Minnesota	1903	81
2253	R.	University of Minnesota	1903	78.9
2255	R.	University of Minnesota	1903	80.8
2256	R.	University of Minnesota	1903	77.2
2257	R.	University of Minnesota	1903	81.5
2258	R.	University of Minnesota	1903	90.8
2259	R.	University of Minnesota	1903	80.1
2268	R.	University of Minnesota	1903	83.1
2269	R.	University of Minnesota	1903	81.9
2270	R.	University of Minnesota	1903	86.9
2272	R.	University of Minnesota	1903	78.4
2274	R.	University of Minnesota	1903	82.4
2276	R.	University of Minnesota	1903	75
2278	R.	University of Minnesota	1903	78.2
2279	R.	University of Minnesota	1903	82.2
2280	R.	University of Minnesota	1903	80
2282	R.	University of Minnesota	1903	79
2283	R.	University of Minnesota	1903	75.2
2285	R.	University of Minnesota	1903	80.2
2286	R.	University of Minnesota	1903	82.4
2288	R.	University of Minnesota	1903	80.6
2289	R.	University of Minnesota	1903	80.5
2290	R.	University of Minnesota	1903	75
2292	R.	University of Minnesota	1903	80.5
2293	R.	University of Minnesota	1903	84.5
2294	R.	University of Minnesota	1903	82
2295	R.	University of Minnesota	1903	80.4
2296	H.	University of Minnesota	1903	82.1
2297	R.	University of Minnesota	1903	*81
2298	R.	University of Minnesota	1903	81.2
2299	R.	University of Minnesota	1903	80.9
2300	H.	University of Minnesota	1903	80.4
2301	R.	University of Minnesota	1903	81.8
2302	R.	University of Minnesota	1903	86.4
2303	H.	University of Minnesota	1903	77
2304	R.	University of Minnesota	1903	82.3
2305	R.	University of Minnesota	1903	87.8
2205	R.	University of Minnesota	1903	82.8
2262	R.	University of Minnesota	1903	85.5
2265	R.	University of Minnesota	1903	81.3
2248	R.	University of Maryland	1902	85.2
2252	R.	University of Iowa	1903	85.2
2267	R.	University of Illinois	1903	83.2
2181	R.	Hamline University	1903	79.4
2182	R.	Hamline University	1903	78.5
2184	R.	Hamline University	1903	76
2185	R.	Hamline University	1903	75.1
2188	R.	Hamline University	1903	87.1
2189	R.	Hamline University	1903	87
2198	R.	Hamline University	1903	85.2
2199	R.	Hamline University	1903	87.5
2203	R.	Hamline University	1903	80.5
2228	R.	Hamline University	1902	87.6
2229	R.	Hamline University	1903	79.1
2230	R.	Hamline University	1903	84
2231	R.	Hamline University	1903	79.4
2232	R.	Hamline University	1903	80
2233	R.	Hamline University	1903	83.4
2234	R.	Hamline University	1903	82.5
2235	R.	Hamline University	1903	86.2
2237	R.	Hamline University	1903	81.7
2238	R.	Hamline University	1903	78.1
2242	R.	Hamline University	1903	78.6
2243	R.	Hamline University	1903	84.8
2244	R.	Hamline University	1903	75.2

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
2261	R.	Hamline University	1903	78
2287	R.	Hamline University	1903	88.6
2192	R.	Rush Medical College	1903	77.8
2204	R.	Rush Medical College	1895	89.4
2196	R.	Barnes Medical College	1903	81
2206	R.	Trinity Medical College	1903	89.1
2224	R.	Trinity Medical College	1903	82.3
2207	R.	College of Phys. and Surgs., Keokuk	1903	79.8
2211	H.	Hahnemann Medical College, Chicago	1903	83.7
2213	H.	Hahnemann Medical College, Chicago	1903	86.6
2263	H.	Hahnemann Med. Coll., Philadelphia	1903	79.5
2212	R.	Detroit College of Medicine	1902	80.8
2218	R.	College of Phys. and Surgs., Illinois	1903	80
2239	R.	Northwestern University, Chicago	1903	86.3
2281	R.	Northwestern University, Chicago	1903	77.9
2306	R.	Northwestern University, Chicago	1903	82.2
2266	R.	Cooper Med. College, San Francisco	1894	75

FAILED.

2221	R.	University of Minnesota	1903	†
2241	H.	University of Minnesota	1903	69.1
2273	R.	University of Minnesota	1903	73.6
2277	R.	University of Minnesota	1903	74.1
2291	R.	University of Minnesota	1903	74.2
2271	R.	University of Illinois	1903	70.9
2236	R.	Hamline University	1903	67.7
2183	R.	Hamline University	1903	71
2254	R.	Hamline University	1903	73.1
2260	R.	Hamline University	1903	71.1
2275	R.	Hamline University	1903	70.9
2284	R.	Hamline University	1902	73.5
2195	R.	Barnes Medical College	1903	74.8
2197	R.	Barnes Medical College	1903	70.4
2223	R.	Rush Medical College	1903	70.6
2240	R.	Rush Medical College	1903	70.6
2222	R.	Iowa State University	1891	64.8
2264	H.	Hahnemann Med. College, Chicago	1897	‡60.6

* Second examination.

† Second examination. No average; did not take all of examination.

‡ Third examination.

North Carolina Report.—The Board of Medical Examiners of North Carolina held examination at Hot Springs, May 27, 1903. Dr. George W. Pressly, Charlotte, secretary, reports that the number of subjects examined in was 7; total questions, 70; percentage required to pass, 80; total number examined, 107; passed, 77; failed, 30. The examination was written.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
20	R.	University of Maryland	1903	90
23	R.	University of Maryland	1903	80
41	R.	University of Maryland	1903	85 5-7
44	R.	University of Maryland	1903	81 2-7
57	R.	University of Maryland	1903	87 6-7
58	R.	University of Maryland	1903	87 3-7
68	R.	University of Maryland	1903	81 6-7
74	R.	University of Maryland	1903	88 6-7
75	R.	University of Maryland	1903	83 2-7
76	R.	University of Maryland	1903	89 2-7
92	R.	University of Maryland	1903	80
88	R.	Univ. of Penn., Med. Dept., Phila	1902	89 5-7
100	R.	Univ. of Penn., Med. Dept., Phila	1900	*96 1-7
106	R.	Univ. of Penn., Med. Dept., Phila	1899	81 2-7
3	R.	University Coll. of Med., Richmond.	1901	81 2-7
10	R.	University Coll. of Med., Richmond.	1900	84 2-7
21	R.	University Coll. of Med., Richmond.	1903	83 3-7
27	R.	University Coll. of Med., Richmond.	1903	‡95 2-7
29	R.	University Coll. of Med., Richmond.	1903	88 3-7
30	R.	University Coll. of Med., Richmond.	1903	†96
93	R.	University Coll. of Med., Richmond.	1903	85 5-7
94	R.	University Coll. of Med., Richmond.	1903	89 4-7
9	R.	Univ. of N. C., M. Dept., Chapel Hill	1903	86 4-7
7	R.	Univ. of N. C., M. Dept., Chapel Hill	1903	92 1-7
71	R.	Univ. of N. C., M. Dept., Chapel Hill	1903	92
72	R.	Univ. of N. C., M. Dept., Chapel Hill	1903	86 6-7
25	R.	University of Kentucky, Louisville	1901	80 1-7
84	R.	University of Kentucky, Louisville	1902	82 5-7
46	R.	University of Louisville, Kentucky	1903	86 3-7
54	R.	University of Louisville, Kentucky	1903	80 4-7
47	R.	University of Tennessee, Nashville	1903	80 5-7
51	R.	University of Tennessee, Nashville	1903	80 2-7
5	R.	University of Georgia, Augusta	1900	87 6-7
28	R.	University of Denver	1902	88 3-7
69	R.	Univ. of Virginia, Charlottesville	1900	80
103	R.	University of Michigan, Ann Arbor	1878	80
107	R.	University of Texas, Galveston	1899	89 1-7
2	R.	N. C. Med. College, Davidson, N. C.	1902	81 1-7
12	R.	N. C. Med. College, Davidson, N. C.	1903	91 6-7
16	R.	N. C. Med. College, Davidson, N. C.	1903	86 2-7
37	R.	N. C. Med. College, Davidson, N. C.	1903	80 6-7
38	R.	N. C. Med. College, Davidson, N. C.	1903	93 6-7
48	R.	N. C. Med. College, Davidson, N. C.	1903	85
49	R.	N. C. Med. College, Davidson, N. C.	1903	90 6-7
60	R.	N. C. Med. College, Davidson, N. C.	1898	84 1-7
61	R.	N. C. Med. College, Davidson, N. C.	1903	80
13	R.	Med. College of Virginia, Richmond.	1903	84 4-7
15	R.	Med. College of Virginia, Richmond.	1903	81 4-7
17	R.	Med. College of Virginia, Richmond.	1903	84 4-7
18	R.	Med. College of Virginia, Richmond.	1903	89 4-7
95	R.	Med. Coll. State of S. C., Charleston	1888	80
14	R.	Baltimore Medical College	1903	83 2-7
22	R.	Baltimore Medical College	1903	85 3-7

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
24	R.	Baltimore Medical College	1903	87 4-7
101	R.	Baltimore Medical College	1903	85
8	R.	Coll. of Phys. and Surgs., New York	1903	92 1-7
77	R.	Coll. of Phys. and Surgs., New York	1900	90 2-7
78	R.	Coll. of Phys. and Surgs., New York	1884	80
85	R.	Coll. of Phys. and Surgs., St. Louis	1903	80 3-7
90	R.	Coll. Phys. and Surgs., Baltimore	1903	82 6-7
26	R.	Tennessee Med. College, Knoxville	1900	81 2-7
31	R.	Tennessee Med. College, Knoxville	1902	80
34	R.	Leonard Med. Coll., Raleigh, N. C.	1903	81 3-7
40	R.	Leonard Med. Coll., Raleigh, N. C.	1903	85 2-7
63	R.	Memphis Hospital Medical College	1903	86 3-7
99	R.	Memphis Hospital Medical College	1902	80
80	R.	Louisville Medical College	1903	80
82	R.	Louisville Medical College	1903	82 3-7
1	R.	Atlanta College of Phys. and Surgs.	1903	92 1-7
36	R.	Howard University, Washington	1900	80
50	R.	U. S. Grant Univ., Chattanooga, Tenn.	1903	80 5-7
64	R.	Vanderbilt Univ., Nashville, Tenn.	1896	80 1-7
81	R.	National University, Washington	1895	88 5-7
87	R.	Jefferson Med. Coll., Philadelphia	1903	92 3-7
104	R.	Denver and Gross Coll. of Medicine	1903	82 6-7
105	R.	St. Louis Medical College	1875	80
73	R.	Baltimore Univ. School of Medicine	1901	80

FAILED.

11	R.	Tennessee Med. College, Knoxville	1901	76 3-7
32	R.	Tennessee Med. College, Knoxville	1900	75 2-7
35	R.	Tennessee Med. College, Knoxville	1902	69 1-7
65	R.	Tennessee Med. College, Knoxville	1901	67 2-7
102	R.	Tennessee Med. College, Knoxville	1901	53 4-7
42	R.	University of Maryland, Baltimore	1903	76
55	R.	University of Maryland, Baltimore	1903	76 6-7
56	R.	University of Maryland, Baltimore	1903	76 3-7
43	R.	University Coll. of Med., Richmond.	1903	78
79	R.	Univ. of Georgia, M. Dept., Augusta	1902	71 6-7
6	R.	University of Nashville, Tennessee	1900	56 2-7
52	R.	University of Tennessee, Nashville	1903	77 3-7
96	O.	Amer. Schl. of Osteo., Kirksville, Mo.	1903	**
97	O.	Amer. Schl. of Osteo., Kirksville, Mo.	1903	65 6-7
98	O.	Amer. Schl. of Osteo., Kirksville, Mo.	1901	66
33	R.	Leonard Med. College, Raleigh, N. C.	1902	66 6-7
39	R.	Leonard Med. College, Raleigh, N. C.	1902	69 6-7
66	R.	U. S. Grant Univ., Chattanooga, Tenn.	1900	66 2-7
67	R.	U. S. Grant Univ., Chattanooga, Tenn.	1903	68 1-7
62	R.	N. C. Med. Coll., Davidson, N. C.	1903	72 3-7
83	R.	Atlanta Coll. of Phys. and Surgs.	1903	73 3-7
91	R.	Atlanta Coll. of Phys. and Surgs.	1895	††
4	R.	New York Med. Coll. and Hospital	1867	††
19	E.	Ga. Coll. Ec. Med. and Surg., Atlanta	1901	65 3-7
45	H.	Boston Univ. School of Med., Homeo.	1899	64 3-7
53	R.	Memphis Hospital Medical College	1901	76 2-7
59	R.	Hospital Coll. of Med., Louisville, Ky.	1902	72 2-7
70	R.	Louisville Med. College, Kentucky	1898	62 1-7
86	R.	Med. Coll. State of S. C., Charleston.	1900	70 6-7
89	O.	Boston Institute of Osteopathy	1901	61 6-7

* First honor.
† Second honor.
‡ Third honor.
** Not graded. Caught cheating.
†† Withdrew.

Association News.

New Members.

New members for the month of June, 1903.

ALABAMA.

Gay, W. S., Whistler.

ARKANSAS.

Dickson, A. G., Paragould.
Norton, M. M., Sunny Side.
McGeehee, E. P., Lake Village.
Sims, W. A., Paragould.

CALIFORNIA.

Jones, H. Isaac, San Francisco.
Rooney, R. F., Auburn.
McGaveren, H. S., Sacramento.
Wright, H. E., Sacramento.
Brown, Adelaide, San Francisco.
Grossman, E. L., San Francisco.
Waterman, H. J., Berkeley.
Watkins, J. T., San Francisco.
Sperry, Mary A., San Francisco.
McGettigen, C. D., San Francisco.
Clark, J. R., San Francisco.
Baker, C. C., San Francisco.
Collischonn, P., San Francisco.
Berndt, R. M. H., San Francisco.

CONNECTICUT.

Axtelle, J. F., Hartford.
Bronson, W. T., Danbury.

DISTRICT OF COLUMBIA.

Lee, Thomas S., Washington.
Castelli, Enrico, Washington.

FLORIDA.

Byrd, Hiram, Arcadia.
Caraballo, Martin, Tampa.
Helms, J. P., Tampa.

GEORGIA.

Smith, Jr., Archibald, Atlanta.
DeLamar, W. C., Mountain Hill.

ILLINOIS.

Kahn, Harry, Chicago.
Baccus, V. J., Chicago.
Vanderhoof, H. W., Wheaton.
Black, Joseph N., Clayton.
Bassoe, Peter, Chicago.
Clausius, Max F., Palatine.
Gay, W. W., Rockport.
Richter, H. M., Chicago.
Worthington, Major H., Chicago.
Chvatal, J. F., Chicago.
Guilford, Paul, Chicago.
McMichael, Orville W., Chicago.
Thompson, W. M., Chicago.
Williams, J. C., Chicago.
Metcalf, Henry S., Mt. Carroll.
Houston, James P., Chicago.
Lagorio, Antonio, Chicago.
Beyerlein, Louis J., Chicago.
Fosberg, George E., Chicago.
Rickett, Howard Taylor, Chicago.
Illingworth, G. M., Chicago.
Findley, Palmer, Chicago.
Thompson, Wm. A., Olney.
Spaulding, D. N., Chicago.
Seifert, Mathias J., Chicago.

INDIAN TERRITORY.

Haley, W. A., Durant.

INDIANA.
Luckett, Charles D., English.
Fulton, George E., Bluffton.
Garr, J. C., Kokomo.
Whitson, E. M., Jonesboro.
Gould, S. W., Argo.

IOWA.
Sprague, M. H., Ottumwa.

KENTUCKY.
McKenney, Elbert B., Caneyville.
Zimmerman, Carolyn E., Newport.
Browne, M. S., Winchester.
Kiser, Jefferson D., Lexington.
Kincaid, James W., Catlettsburg.
Moore, A. H., Ashland.

LOUISIANA.
Sewell, Bennett N., Bryce.
O'Donnell, Robt. W., New Orleans.

MARYLAND.
Claybrook, E. B., Cumberland.
Mayer, A. H. A., Baltimore.

MASSACHUSETTS.
Haynes, Mabel Stevens, Boston.
Gardner, Charles W., Boston.

MICHIGAN.
Bratton, Edw. E., Detroit.
Haines, Thos. J., Three Rivers.
Barth, Louis, Grand Rapids.
DeWitt, Lydia M., Ann Arbor.
Johnston, Stuart, So. Lake Linden.
Stapleton, Jr., Wm. J., Detroit.
von Colditz, G. Thomsen, Mount Clemens.
Henkel, Julius F., Detroit.
Meddaugh, Martin V., Detroit.
Taylor, Geo. Gordon, Allegan.
Burdon, Reginald M., Houghton.
Lickler, Edw. H., New Baltimore.
Adam, James R., Detroit.
Morden, E. T., Adrian.
Schenck, Benj. R., Detroit.
Youngquist, O. G., Marquette.
Yates, John C., Norwood.
Flynn, E. H., Marquette.
Galbraith, Stuart E., Pontiac.

MINNESOTA.
Schmitt, Aaron F., Wells.
Crowe, John H., Virginia.

MISSISSIPPI.
Brooks, J. S., Robinsonville.
Alexander, Morris J., Tunica.
Crisler, J. A., Yazoo City.
Shivers, M. O., Greenville.

MISSOURI.
Hardy, John W., Sumner.
Behrens, Louis H., St. Louis.
Stuckle, W. P., Clyde.
Kessler, E. H., St. Louis.
Allen, A. B., Maryville.
Sayler, H. L., Elmo.
Crowson, E. L., Pickering.

NEBRASKA.
Edgington, A. E., Omaha.
Pinto, A. S., Omaha.
Brown, H. A., Long Pine.
Stewart, M., Tecumseh.
Keettle, Wm. C., Lyons.

NEW YORK
Palmer, Albert H., Marlborough.
Heston, E. H., Clintondale.
Sauer, J. George, New York.
Dick, Andrew J., Watertown.

NORTH CAROLINA.
Mason, R. E., Charlotte.

OHIO.
Moxley, N. K., Ironton.
Williams, John G., Cincinnati.
Trimmer, E. Luther, East Liverpool.
George, John F., Ft. Jennings.

PENNSYLVANIA.
Walker, S. E., Philadelphia.
Roderick, Edw. R., Wilkesbarre.
Mengel, S. P., Parson.
Hartman, Jr., Lawton M., York.
Easby, Alice R., Media.
Pyfer, Howard F., Norristown.

SOUTH CAROLINA.
Baker, S. Chandler, Scranton.
Rees, Charles M., Charleston.
Nell, George P., Greenwood.

SOUTH DAKOTA.
Hetlesater, Reinert, Canton.

TENNESSEE.
McCown, Oswald Stuart, Memphis.

TEXAS.
Morgan, George L., Turtle Bayou.
Conson, Augustus H., Gainesville.
Terry, J. S., Ennis.
Swain, Geo. W. B., Dallas.
Moore, Jr., Jos. Franklin, Tyler.
Chapman, John B., Paris.
Rosser, Charles M., Dallas.
Parker, G. D., Houston.
Stuart, Joseph R., Houston.
Jones, W. C., Sherman.

VERMONT.
O'Brien, Jas. F., Bellows Falls.

VIRGINIA.
Shepherd, Lemuel C., Norfolk.

WASHINGTON.
Smith, Clarence G., Seattle.
Cunningham, Arthur R., Spokane.
Chenoweth, W. S., Sprague.
Genoway, Charles, Spokane.

WEST VIRGINIA.
Abel, Wm. Clay, Mt. Union.
St. Clair, Wade Hampton, Bluefield.
Hatfield, H. D., Eckman.
Mahood, C. F., Rend.

WISCONSIN.
Reynolds, N. W., Lone Rock.
Cuolahan, Archibald, Merrill.
Pope, F. J., Racine.
Collins, C. D., Milwaukee.
Dohearty, F. P., Butternut.
Boden, J. E., Milwaukee.
Rosenberry, Abraham Bertolet, Arbor Vitae.
Steenberg, H. S., Milwaukee.

Medical Organization.

Reorganization in Minnesota.

Minnesota was the last of four great states to set aside its action of partial reorganization of last year and adopt the constitution and by-laws recommended by the American Medical Association in full. The annual meeting was held at St. Paul, June 17 to 19.

While much had been accomplished during the year, and the membership had greatly increased, the new plan of organization was defective and unsatisfactory. No provision was made for a house of delegates or council, and membership in county societies was left optional. As a partial offset to these defects, and especially to the lack of a council, Dr. W. S. Fullerton, an efficient and enthusiastic worker, was appointed state organizer. Although his work was single-handed, and largely gratuitous, he had visited and organized fifty-eight counties during the year, and had laid the foundation for a complete organization.

After his return from the New Orleans meeting, Dr. J. W. Andrews, president of the State Association, began an active campaign for the adoption of the uniform plan of organization. His annual address was mainly devoted to this, and was an able presentation of the subject. At its close, a committee was appointed to consider the question, with instructions to report during the meeting. On the following day the committee reported, recommending that the action of last year be rescinded and that the uniform plan of the Association be substituted therefor. This was done by a unanimous vote. The committee also recommended that the state be divided into eight councilor districts, arranged according to the lines of travel, and that, in partial recognition for the value of his services in the past, Dr. Fullerton be made chairman of the first council.

The meeting was fairly well attended and was interesting throughout, in spite of a bad section arrangement which has found its way into many state associations. Under the old plan of organization the society was divided into three sections, the first day being devoted to surgery, the second to internal medicine, and the third to state medicine. This would probably be an unfortunate arrangement, even for a large meeting, for obvious reasons, but is especially so where the attendance is not large. Such meetings are for the entertainment and benefit of all, but particularly for the general practitioners from town and country districts, and the work in the different branches should be so interlarded in the program as to engage the attention of all classes, at least during a large part of every day.

The officials elected for the ensuing year are as follows: President, Charles Lyman Greene, St. Paul; vice-presidents, Charles Hill, Pine Island; Jeannette M. McLaren, St. Paul, and Walter H. Darling, St. Peter; secretary, Thomas McDavitt, St. Paul; treasurer, Richard J. Hill, Minneapolis.

Council.

Wm. S. Fullerton, St. Paul; Frederick A. Knights, Minneapolis; Alfred E. Spaulding, Luverne; Adolph O. Bjelland, Mankato; Eugene H. Hensel, Alexandria; Harper M. Workman, Tracy; Walter Courtney, Brainerd, and Franklin A. Dodge, Le Sueur.

It may be interesting to note that twenty-eight states have now adopted the uniform plan of organization. This includes all of the great states in the Ohio and Mississippi valleys, all the Lake and Gulf states, two of the three Pacific states, besides North Carolina, New Jersey, New Hampshire, Colorado and Idaho, in other sections. If systematic work can be kept up within all of these states for a few years, with the intelligent enthusiasm now promised, we shall have an organized profession.

J. N. McCORMACK.

Societies.

Humboldt County (Cal.) Medical Society.—This society, at its regular meeting, June 9, adopted the amended constitution and by-laws, so that it now is in conformity with the state society.

Buncombe County (N. C.) Medical Society.—At its meeting in Asheville, June 15, the society adopted the changes in its constitution and by-laws necessary to make them conform to those proposed by the American Medical Association.

Cheboygan County (Mich.) Medical Society.—At the annual meeting held in Cheboygan, June 16, Dr. Wilbur F. Reed was elected president, Dr. Ira C. Williams, vice-president, and Dr. Charles B. Tweedale, secretary-treasurer, all of Cheboygan.

Lane County (Ore.) Medical Association.—At the annual meeting held in Eugene, June 17, Dr. Waldo L. Cheshire, Eugene, was elected president; Dr. George Wall, Cottage Grove, vice-president, and Dr. John W. Harris, Eugene, secretary and treasurer.

Cedar County (Neb.) Medical Society.—This society, a component part of the state medical society, met at Hartington, June 24. Every physician in the county is a member of the society. The next meeting is to be held in Randolph on September 24.

Columbus (Ohio) Academy of Medicine.—The consolidation of the Franklin County Medical Society with the Columbus Academy of Medicine, was perfected at a meeting of the latter society, June 1, when the joint committee on membership reported favorably on 21 applications.

Johnson County (Kan.) Auxiliary Medical Society.—Physicians of Johnson County met at Olathe, June 11, and organized

this society, with Dr. H. E. Williamson, president; Dr. Jessie Thomas, vice-president; Dr. Frank F. Greene, secretary, and Dr. B. Frank Stout, treasurer, all of Olathe.

Elkhart **County (Ind.) Medical Society.**—At its meeting, June 25, the society decided to change its conditions of membership to accord with those of the state and national societies. Dr. John C. Fleming, Elkhart, was elected president; Dr. I. Wright Short, Elkhart, vice-president, and Dr. Yoder, Goshen, secretary-treasurer.

Iberville **Parish (La.) Medical Society.**—The physicians of Iberville Parish met at Plaquemine, June 17, and organized a parish medical society, with the following officers: Dr. Arthur A. Allain, Bayou Goula, president; Dr. Francis J. Keamey, Plaquemine, vice-president, and Dr. Eugene Halloway, Plaquemine, secretary and treasurer.

Iowa **Health Officers' and City Physicians' Association.**—The health officers and city physicians of Iowa met at Des Moines, June 16, effected a temporary organization, with Dr. Joseph A. Valenta, Iowa City, chairman, and Dr. Cassius T. Lesan, Mount Ayr, secretary, and appointed committees on constitution and by-laws, permanent organization and finance.

Branch **County (Mich.) Medical Society.**—This society, recently organized under the constitution and by-laws proposed by the American Medical Association, at its meeting in Coldwater, June 16, elected Dr. Stephen H. Clizbe, Coldwater, president; Dr. Henry W. Whitmore, Quincy, vice-president, and Dr. Samuel Schultz, Coldwater, secretary and treasurer.

Lewis **County (Ky.) Medical Society.**—About half the physicians of Lewis County met at Vanceburg, June 15, and organized a county medical society, to be in affiliation with the Kentucky State Medical Society and the American Medical Association. Dr. James W. Kincaid, Catlettsburg, councilor for the district, was present and explained the plan of organization. Dr. Lewis A. Grimes, Concord, was elected president; Dr. John F. Irvine, Tolesboro, vice-president; Dr. Aaron F. Hill, Vanceburg, secretary, and John C. Graham, Trinity, treasurer.

International Association of Railway Surgeons.—The annual meeting was held in Indianapolis, June 18. The next meeting will be held in Chicago in May, 1904. The following officers were elected: President, Dr. James H. Ford, Indianapolis; vice-presidents, Drs. James M. Weaver, Dayton, Ohio; Edwin F. Yancey, Sedalia, Mo.; M. V. B. Newcomer, Tipton, Ind.; Charles R. Dickson, Toronto, Ont.; William R. Hamilton, Pittsburg, Pa.; David F. Stuart, Houston, Texas, and Hugh M. Taylor, Richmond, Va.; secretary, Dr. Louis J. Mitchell, Chicago, and treasurer, Dr. James A. Duncan, Toledo, Ohio.

Frisco **Medical Association.**—The second annual meeting of the surgeons of the Frisco system was held in Springfield, Mo., June 23 and 24. The following officers were elected: President, Dr. George W. Cale, Springfield; vice-presidents—for Alabama, Dr. Edward P. Lacey, Bessemer; for Arkansas, Dr. H. Clay Dunavant, Osceola; for Indian Territory, Dr. Fred S. Clinton, Tulsa; for Kansas, Dr. George C. Purdue, Wichita; for Mississippi, Dr. Samuel A. Gassaway, New Albany; for Missouri, Dr. George O. Coffin, Kansas City; for Oklahoma, Dr. A. H. Bourgardt, Cordell; for Tennessee, Dr. W. Britt Burns, Memphis, and for Texas, Dr. Willliam A. Duringer, Fort Worth; secretary, Dr. Roche W. Hogeboom, Springfield, Mo., and treasurer, Dr. Walter A. Camp, Springfield, Mo.

Connecticut Medical Society.—The one-hundred and eleventh annual meeting was held in Hartford, May 27 and 28, under the presidency of Dr. Gould A. Shelton, Shelton. The committee on tuberculosis reported that, of the 696 members of the society, only 115 had returned replies to the circular sent out by the commitee, which did not feel justified in assuming that the conclusions drawn from the collective investigations represented the concensus of opinion of the society. The president, in his address, commented favorably on the organization scheme as proposed by the American Medical Association, and on the elevation of the standard of medical education approved by the American Association of Medical Colleges and by the American Medical Association. The committee on revision of constitution and by-laws on the plan recommended by the American Medical Association, reported that it would not be able to make a complete report until the next meeting. The following officers were elected: President, Dr. Samuel B. St. John, Hartford; vice-president, Dr. William H. Carmalt, New Haven; secretary (for four years), Dr. Nathaniel E. Wardin, Bridgeport; assistant secretary, Dr. Henry S. Miles, Bridgeport; treasurer, Dr. William W. Knight, Hartford, and delegate to the American Medical Association, Dr. L. Duncan Bulkley, Norfolk. At the annual banquet, Dr. Oliver C. Smith, Hartford, presided as toastmaster. Charles T. Wells, a son of Dr. Horace Wells the Hartford discoverer of anesthesia, presented the society with a portrait of his father taken in 1825.

Ontario Medical Association.—The annual meeting was held in Toronto on June 16, 17 and 18. Dr. J. C. Mitchell of Toronto presided, and Dr. Harold C. Parsons, Toronto, acted as secretary. Dr. J. H. Musser, Philadelphia, President-elect of the American Medical Association, was present and delivered a very able and practical address on the treatment of pneumonia. In moving a vote of thanks to Dr. Musser, Dr. N. A. Powell jocularly referred to the powerful influence the Ontario Medical Association wielded in electing the Presidents of the American Medical Association. Some years ago Dr. Henry O. Marcy, Boston, was a guest of the association, and the American Medical Association promptly made him its President. Then followed Dr. John A. Wyeth, with a similar result, and now the good record had been kept up in Dr. Musser. Dr. Thomas S. Cullen, Baltimore, presented a valuable paper on "Uterine Myomata and Their Treatment." Mr. I. H. Cameron, in moving a vote of thanks to Dr. Cullen, stated he believed it was the best contribution on the subject ever written. A very interesting address on the medical witness under cross-examination was delivered by Hon. W. R. Riddell, K. C., Toronto, who divided all liars into three classes, liars, d——d liars and medical experts. A very interesting and profitable discussion took place on the morning of the third day on the subject of arteriosclerosis. The etiology and pathology was dealt with by Dr. H. B. Anderson of Toronto; the cardiac aspect by Dr. T. W. G. McKay, Oshawa, Ont.; the renal aspect by Dr. John Caven, Toronto; the cerebral aspect by Dr. Hugh McCallum, London, Ont.; the ophthalmic lesions by J. Cameron Connell, Kingston, Ont.; and therapeutics by Dr. John L. Davison, Toronto. The following officers were elected: President, Dr. James F. W. Ross, Toronto; secretary, Dr. Charles P. Lusk, Toronto; treasurer, Dr. Andrew R. Gordon, Toronto. Toronto was selected as the next place of meeting.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, June 2, 1903.

The President, Dr. Wendell Reber, in the Chair.

Symposium on Epilepsy.

"The Treatment of Epilepsy" was the title of a paper read by Dr. Luther C. Peter, in which he directed attention to the fact that the treatment of the disease must be largely prophylactic, first, by preventing the causes which give rise to the convulsion, and second, by preventing the subsequent convulsions, with the consequent mental and physical changes. He believed that much more could be done for the patients by careful attention to the diet, daily bath, sleep and environment, especially in children, than by medical measures, and these measures are particularly important if the child has a neurotic predisposition. He believed tea and coffee acted in many cases as inducing factors, and in some cases were the only causes of epilepsy in children; the great amount of mental work done by children with the present school system, he believed, also was accountable for a considerable number of these cases. After the epileptic habit is formed the general management of the case is important, and while he believed that drugs played an important rôle in the cure of these cases, he felt that the general management was the most important factor of every complete recovery. The author recommended the closest scrutiny of all parts of the body in order to detect any cause for epilepsy, and stated that he had seen cures follow the correction of refractive errors, removal of adherent foreskin, removal of constipation, etc., the success depending entirely upon the early recognition of the condition and removal of the cause. The toxic form, including the alcoholic type, he believed to be especially amenable to general treatment. It is pretty generally conceded that the convulsion has its origin in the cortical cells, and, therefore, the class of drugs which do the most good are nerve sedatives, the drug most extensively used being the bromid salts. He stated that he believed in many instances the mental dullness was due more to the excess of the bromids than to the epilepsy, and referred to the fact that few patients could take this remedy in larger amounts than 30 to 40 grains per day for any length

of time without producing bromidism; the addition of several drams of infusion of digitalis often intensifies the sedative action, without aggravating the bromidism; a minim or two of Fowler's solution will prevent the acne. Chloral will act beneficially for a time in controlling the convulsions, and if the patient has mental warning of the approach of an attack and it is given in sufficiently large doses it will often prevent the convulsion. He stated that he had used the fluid extract of solanum in a considerable number of cases, and in adults had found that as good results could be secured with from 2 to 4 drams of this drug as from 10 to 15 grains of potassium bromid, and its use can be continued indefinitely without the depressing mental effects. Its use has been followed by equally gratifying results in children, who usually stand the bromids so poorly. In those patients who have a considerable period of premonition, inhalation of nitrite of amyl is of much value in warding off the attack.

Diagnosis of Atypical Epilepsy.

DR. A. C. BUCKLEY read a paper on the above subject, in which he called attention to the necessity for early diagnosis and correction before the nervous mechanism had formed the epileptic habit. After giving in detail the symptoms of a typical attack of epilepsy, he stated that there were many cases which were not recognized for months, or perhaps years, owing to the fact that the attacks may be of such a nature as not to be noticed by the patient or his family, or may occur only during the sleeping hours, when, except for the fact that he feels fatigued and has marked muscular soreness upon awakening, the patient when he seeks medical advice is not aware of his true condition. He believed that the minor attacks were less responsive to treatment than the major attacks. They usually consist of momentary unconsciousness which very often is not recognizable, and it is in these that the greatest deviation from the set symptoms occur. Nocturnal epilepsy, when the symptoms are not sufficient to be recognized by the patient, can only be diagnosed by the after-signs, such as soreness of the tongue, usually on one side, frequently blood stains on the pillow, if the tongue has been bitten, minute conjunctival extravasations, voiding of urine in bed, and even these are frequently absent. He believed that a confusing factor in diagnosis was the differentiation between the minor epileptic attacks and the syncopal attacks; the epileptic attacks occur independent of the surroundings and in the absence of any predisposing causes, such as emotion, physical exertion, overheated rooms, hot, humid weather, etc., which frequently produce syncopal attacks. In the latter condition there is usually an irregular pulse and clammy skin, which is not present in epilepsy. In epilepsy the loss of consciousness is sudden and complete, and returns quickly, while in syncope it is usually preceded by a subjective feeling of faintness. Epilepsy may be preceded by an aura which may be described as a feeling of faintness, but there is usually associated with it a sensation of fear or strangeness which is not present in syncope. Distinct vertigo is in favor of epilepsy, although care must be taken to distinguish the vertigo from dizziness, which is sometimes present in syncope. He considered the automatic type of epilepsy of great importance. He believed that hysteroid could usually be distinguished from epileptic seizures by the fact that the former are usually coordinated.

DR. CHARLES W. BURR referred to the fact that the etiology of epilepsy was still very much in the dark, and believed that the greatest hope lay in the prevention, rather than the cure, of epilepsy, and in children predisposed to this condition, it is especially important that they should live out of town, have nourishing food and avoid mental overwork. He believed that alcohol played a considerable rôle in the production of epileptic seizures, and reported the case of a shoemaker, who would have attacks only after a drunken debauch. He felt that many of the cases of dementia were much accentuated by the long-continued use of bromids, and while he had not attained very good success with horse-nettle, thought this fact could probably be accounted for in that he had not given it in sufficiently large doses. In regard to diet, he did not believe that the patient should be required to forego red meat altogether, although he felt that its use should be restricted. He referred to several cases of post-epileptic automatisms, one man would go through the motions of pulling a rope for three or four minutes every time he would have an attack, and he expressed the opinion that in some instances this condition was responsible for the perpetration of innocent crime.

DR. SAMUEL WOLF felt that a careful study of the aura in connection with the sensory nerves might reveal something in regard to the etiology of the condition, and expressed the opinion that the attack originates in the peripheral sensory nerves rather than in the cortical cells. He referred to the fact that a large number of curious conditions have been recognized as epileptic equivalents directing particular attention to the fact that an Italian writer had recently advanced the theory that a good many of the cases of tachycardia are really cases of epilepsy, and reported a case of tachycardia which had recently come under his observation which he rather inclined to think was of this class. In the treatment of epilepsy he believed the bromids to be the foremost remedies, and if bromidism occurs, the addition of one or two drops of Fowler's solution with each dose is of value. Atropin is also frequently of advantage in conjunction with the bromids.

DR. WENDELL REBER stated that he had made a careful study of the ocular condition of about fifty epileptics for about a year, and found pupillary inco-ordination in about one to three, optical imbalance in about 35 per cent., and in a good many hypermetropic astigmatism was present. He did not attach much importance to these eye conditions, however, as all of them frequently exist in other conditions. He referred to the fact that a majority of epileptics were great overfeeders and not very active.

DR. LEWIS H. GOOD reported a case of a man who became intoxicated, and after he went home fell over in a fit; after this was over he was very violent for about an hour, breaking up furniture, etc., after which he fell into a deep sleep or comatose condition. He also reported another case, apparently hysterical, in which the symptom is incessant talking for about half an hour, the acts being both nocturnal and diurnal. The patient was run over by a wagon when a child and at puberty had amenorrhea and dysmenorrhea, since which time she has had these attacks.

DR. SOLOMON NEWMAYER referred to the rarity of the occurrence of epilepsy among the Hebrew race. He reported the case of a man who was suddenly taken ill on a very hot day; he became unconscious, had a temperature of 104 degrees; spermic fever was suspected and the usual treatment applied. After about an hour he revived, the case proving to be one of epilepsy.

DR. J. FRANK WALLIS reported three cases of convulsions, one of which he attributed to the patient eating cabbage, the other to eating sausage and pretzels, and the third to the fact that the patient had eaten a very hearty dinner. All of these cases were relieved by rectal injection, and the suggestion was made as to whether they were cases of true epilepsy or not.

DR. NATHAN G. WARD referred to cures that had been reported by the removal of obstructions of the naso-pharynx or by the removal of obstructions from the ear, the condition in most of these cases being obstruction or deflection of the septum, adenoids, enlarged tonsils and a few cases of pharyngeal abscess and suppurated ears. He believed that the greatest good could be secured by the use of prophylactic measures tending to prevent the attacks.

DR. CHARLES C. BIEDERT reported the cases of two brothers, both of a neurotic temperament, in which the attacks were frequently superinduced by disputes with their wives, in which the cold-water treatment was administered with gratifying results. He also referred to a case caused by alcoholism which was benefited by this same method.

DR. HOWARD S. KINNE felt that a very important factor in the prophylactic treatment of epilepsy was the placing of all infants on a properly nourishing diet, as nearly similar as possible to the mother's milk. He believed that one reason why epilepsy was less frequent among the Hebrew race was owing to the fact that the mothers usually nurse their chil-

dren. Alcohol he did not believe played a very important part in the production of epilepsy in the subject himself, but was more manifest in his descendants.

DR. WILLIAM EGBERT ROBERTSON called attention to the fact that convulsive attacks produced by bradycardia are very similar to the epileptic seizures. He believed that too often convulsions in children were attributed to teething and very little attention paid to them, which he felt accounted for at least some of the cases of epilepsy. He felt that tea and coffee played but a small rôle in the production of epilepsy in those not predisposed to the disease.

DR. LUTHER C. PETER, in closing, stated that he did not believe solanum to be any better drug than bromid, but its greatest merit consisted in the fact that it could be given in sufficiently large doses to benefit the patient for a long time, without producing any mental effects. In regard to alcohol as a causative factor, he stated he had three cases under his observation at the present time, who were subject to the seizures only after a debauch, but did not feel prepared to say that this was the cause of the epilepsy.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

Twelfth Annual Meeting, held in Boston, May 19, 20 and 21, 1903.

The President, Brigadier General Robert A. Blood, Surgeon General of Massachusetts, in the Chair.

Welcome.

The opening session was held in Faneuil Hall, where the association was welcomed to Boston by Governor J. L. Bates and Dr. George E. Francis, president of the state medical society.

President's Address.

GEN. ROBERT A. BLOOD discussed the value of the association in bringing into harmony the work of the medical officers of the regular establishment, the national guard and the volunteers, considering this in the light of his own experience during the Civil and Spanish-American wars, and held that, with the facilities afforded by the association for uniform conduct, nothing but the failure of the government to make prompt, proper and ample appropriations could interfere with the highest efficiency of the medical service.

Public Service Medical School.

LIEUT.-COL. JOHN VAN R. HOFF, U. S. A., reported for this committee on the work of the Army and Navy medical schools for the year, and detailed the recommendations of the Surgeon-General of the Army relative to the establishment of an army medical school, in which a candidate should pass one year as a medical cadet and four years as a medical officer. Colonel Hoff, however, proposes to go still further and educate government medical officers *a binitio*, at an institution similar to the military academy at West Point, at which preparation would be made for all branches of the medico-military service.

COL. R. R. DE WREDEN, of Russia, described the Imperial Medical School at St. Petersburg, which gives its students their entire medical and military education, and whose graduates are assigned to hospitals or regiments in accordance with their class standing; the seven highest in each class being sent abroad to elaborate their studies and return as adjunct professors; the next highest being assigned to the hospitals, and the remainder to regiments.

Education of the Medical Officer of the Army.

MAJOR WILLIAM C. BORDEN, U. S. A., gave a succinct survey of the post-graduate instruction of the United States Army, dwelling especially on the work of the Army Medical School and incidentally referring to similar schools of other countries. He urged the extension of the facilities of the school to the medical officers of the militia.

This article was discussed at length by representatives of the United States Navy, various volunteer officers and the representatives from Canada and England. In closing the discussion Major Borden admitted the necessity of thorough professional training in the military medical officer as a prime factor, but recognized that in military service, administrative work was also of great importance.

The Acting Assistant Surgeon.

MAJOR AZEL AMES, U. S. V., commented on the anomalous position of the contract surgeon of the United States Army, observing that he had all the responsibilities and shared all the dangers of his commissioned colleague without either the honors or rewards to which the latter may look forward. He can anticipate no promotion, has no increase in pay for length of service, has no retirement nor pension when he becomes worn out in the service. The author forcibly urged the improvement of the status of this valuable and yet officially unappreciated member of the military service.

The Presidio General Hospital.

COL. ALFRED C. GIRARD, U. S. A., presented an exhaustive report of the U. S. A. General Hospital at the Presidio of San Francisco, Cal., for the years 1901-02. The report dealt with the general administration, the medical, surgical, bacteriological, eye, ear, nose and throat and the *x*-ray work. The total number of patients was 4,551, with a mortality of 92. The surgical cases numbered 728, of which 106 were for hernia, 58 for gunshot wounds, 35 for varicocele, 27 each for appendicitis and tumors, 10 each for bolo wounds and hepatic abscess. The report was accompanied by valuable appendices on liver abscesses, and the mosquitoes of the Philippines.

Surgeons General of the Army.

MAJOR JAMES EVELYN PILCHER, U. S. V., presented a series of biographical sketches of the surgeons general of the army, from the Revolution to the close of hostilities in the Philippines, illustrated by a complete series of portraits.

Instruction of Hospital Corps.

CAPT. FREDERICK P. REYNOLDS, U. S A., detailed the following principles on which the work of the U. S. A. Hospital Corps Company of Instruction should be based: 1. To at once impart a thorough knowledge of discipline in the same way and by much the same methods as is imparted in the line of the Army, with which the hospital corps is always serving; 2, to teach men the principles of order and neatness, both as regards themselves and their personal equipment, and also to familiarize them with the departments of a hospital and the articles with which they work; 3, after this, to impart to each man a knowledge, as far as his mental capacity will permit, of practical nursing, of preparation of diets for the sick, of first-aid and transportation of the wounded, and of ambulance driving and care of animals; 4, to teach them to care for themselves and the equipment entrusted to them in field service, and to be familiar with the usual duties of hospital corps men on the march, in camp, and during an engagement; 5, to instruct in clerical work, materia medica and pharmacy those who have aptitude for such work.

Retirement and Pensions.

MEDICAL DIRECTOR JOHN C. WISE, U. S. N., premised that the medical officers of the United States Navy are more directly responsible than anyone else for the ultimate incidence of our vast pension appropriation, and urged the highest care in diagnosis and record with especial attention to the question of incurrence if disability in the line of duty.

Prevention of the Spread of Infectious Diseases on Board Ship.

SURGEON HENRY G. BEYER, U. S. N., confined himself to the consideration of measles, an affection of singular importance in military and naval service, and recognized that the chief danger of infection in this and allied diseases lay first with the patient, and only secondarily with the persons and things with which he had been brought in contact. The author's practice was, the disease having been diagnosed, to sterilize by steam the patient's clothes, using bichlorid for disinfecting the shoes. The patient then had a thorough scrubbing with soap and warm water, and a complete sponging with bicholorid 1 to 2,000, and was put to bed wrapped in a sheet moistened with the same solution. The bichlorid bath was

repeated thrice daily during the height of the eruption and twice a day thereafter. The mouth and nose were frequently cleansed with normal salt solution containing a minute quantity of carbolic acid or bichlorid. All excretions were immediately disinfected and complications promptly treated. By the use of these precautions the author believed it possible readily to control the spread of the disease.

Antimalaria Work.

LIEUT. F. F. RUSSELL, U. S. A., summarized the result of two seasons of work against malaria made at Ft. Washington, Md., 13 miles below Washington. The use of petroleum on the stagnant breeding pools in the neighborhood was immediately beneficial, resulting in the first year in the diminution of the percentage of malarial cases from 19.53 to 8.63; and this percentage was reduced the following year to 4.18. The use of the oil was a measure of temporary resort only, and the author considered that a portion, at least, of the good results, was due to the establishment of a general drainage system.

Tuberculosis at Fort Stanton.

SURGEON PAUL M. CARRINGTON, U. S. P. H. and M.-H. Service, described the treatment of tuberculosis at Fort Stanton. He is a sturdy advocate of tent-dwelling for the consumptive. The spread of infection is controlled by the use of spit cups and periodical disinfection of apartments. While an advocate of exercise under favorable conditions the author believes that the advice to "go West and rough it on a ranch" is responsible for many unnecessary deaths.

Medical Treatment of Appendicitis.

LIEUT. E. CASTELLI of the Italian Army believes that the appendix must be considered as a tubular ganglion, receiving germs either from the blood or the lymphatics, by which appendicitis may become a complication in scarlet fever, pneumonia, erysipelas, parotitis, etc. The author is opposed to treatment by opium or local ice applications, but resorts to preliminary treatment by salicylate of sodium as a cholagogue and antithermic. Three hours later he administers calomel as an antiseptic, cholagogue, laxative diuretic and pancreatic stimulant. He controls the pain by warm baths and hot saline solution enemata. The bacterial cause of the trouble, residing in the blood, is treated by subcutaneous injection of a dilute carbolic acid solution.

Latent Malarial Infection.

LIEUT. CHARLES F. CRAIG, U. S. A., described the pathology of malarial infection, which had not been manifested by symptoms, and in which blood examination did not necessarily show the presence of malarial parasites. His observations were based on autopsy findings. He found that the changes were confined almost entirely to the spleen, and consisted chiefly in an engorgement of the splenic sinuses with red cells and leucocytes, the presence of infected red cells and of phagocytes and melaniferous leucocytes, increase in the cells and the splenic pulp with more or less degeneration and karyokinesis and pigmentation of the organ confined to the edges of the Malpighian corpuscles and the splenic sinuses and trabeculæ. These facts bear out the time-honored theory that the spleen is the seat of malarial infection.

Early Differential Diagnosis of Typhoid Fever.

MAJOR FREDERICK SMITH, D.S.C., R.A.M.C., was awarded the Enno Sander Prize for his essay on this subject. He considered his subject under the following heads: Introductory; subjective early symptoms; objective symptoms; temperature as an aid in the diagnosis; typhus and relapsing fevers; tuberculosis, respiratory diseases and influenza, meningitis, septicemia, puerperal fever, pyemia, endocarditis, pericarditis, glanders; gastroenteritis, pericecal inflammation, dysentery; febricula; Malta fever; malarial fever; plague and other diseases mistaken for typhoid, and chemical reactions and microscopic methods in relation to the earliest stages of typhoid. He concludes that, in the field, the medical officer must rely mainly on his clinical acumen and summarizes his studies in that direction as follows: 1, There is scarcely any disease accompanied by fever which has not been at times mistaken for typhoid fever; 2, a good many cases are wrongly diagnosed owing to carelessness or to want of knowledge; 3, the disorders most liable to be confounded with typhoid fever are: Typhus fever, tuberculosis, pneumonia, influenza, febricula, or unnamed continued fever, Malta fever, malarial fever and paratyphoid; 4, it is frequently impossible by non-bacteriologic methods to differentiate between typhoid and the diseases named above in four days or even a week and more; 5, our safety, from a public health point of view, lies in regarding all doubtful cases as typhoid until they have been proven to be something else, and 6, the anomalous cases are more numerous and the difficulties in the way of diagnosis greater, in military than in civil life.

History, Cause and Mode of Transmission of Yellow Fever.

LIEUT. JAMES CARROLL, U. S. A., presented an encyclopedic paper tracing yellow fever from its earliest historical appearance in Barbadoes in 1647 to the decline of the disease in Cuba in 1902. The author concludes that yellow fever is contracted only through the bite of infected mosquitoes twelve or more days after feeding on the patient in the earlier period of the disease. Experimentally, the disease can be produced by subcutaneous injection of blood or even of infiltrated blood serum of a patient, provided the material can be obtained sufficiently early in the attack.

The Treatment of Yellow Fever in Havana.

COL. WILLIAM C. GORGAS, U. S. A., emphasized the desirability of receiving the patient during the first three days of the attack and of keeping him in the recumbent position absolutely without exertion. Food was prohibited during the active stage and milk was given when the temperature subsided unless contraindicated. Water and cracked ice were given ad libitum. Cathartics were employed as needed. Phenacetin was exhibited for headache and muscular pain. Saline enemata and local applications to the back were given for urinary suppression or diminution. The convulsions were due to toxemia rather than to uremia as had been previously supposed. Gastric hemorrhage was treated by cracked ice and rest, without astringents. This treatment, as compared to the use of drugs as employed by the Spanish physicians, was far more successful, as the mortality of the American Hospital was 12 per cent. less than that under the Spanish treatment.

Spinal Anesthesia in Military Surgery.

LIEUT.-COLONEL AUGUSTIN AGUIRRE of the Mexican Army presented an interesting report of the subarachnoid injection of hydrochlorid of cocain, according to the method of Tuffier, for which he claimed the following advantages: Ease of application; the surgeon is his own anesthetist; speedy action; absolute safety and a small, easily carried and readily sterilized armamentarium. The author reported 210 cases in which the drug had been employed.

Tropical Abscess of the Liver.

LIEUT. E. W. PINKHAM, late U. S. A., reported sixteen cases of hepatic abscess with seven recoveries, the high mortality being due to failure to recognize the condition sufficiently early. He observed that the so-called abscesses of the liver are not really abscesses nor are their contents pus; they are rather areas of necroses, liquefaction of liver tissues and are made up of liver cells in all stages of degeneration and disintegration, free fat globules, more or less of blood corpuscles, and serum. He commented on the freedom with which the liver may be examined without dangerous hemorrhage, and objected strongly to evacuation and drainage by the trocar or cannula, urging free incision.

Anterior Dislocation of the Shoulder.

ASST.-SURGEON GENERAL G. TULLY VAUGHAN, U. S. P. H. and M.-H. S., recommends the following methods, in the order given, of the treatment of anterior dislocation of the shoulder: Direct reposition; extension and counter-extension; Kocher's method; and arthrotomy. He related a case in which all were successively employed, free opening finally showing that reduction had been provided by a detached greater tuberosity; reduction was then easily affected by pressure in the axilla with adduction of the arm.

The Interoceanic Canal.

The following resolutions, presented by Lieutenant-Colonel J. R. Weaver, N. G., Pa., were unanimously adopted:

WHEREAS, It is well known that the previous excavations for an Isthmian canal have been attended with a large amount of illness and a heavy mortality, due mainly to malaria and yellow fever; and

WHEREAS, Recent discoveries as to the cause of these diseases have enabled medical officers to control their ravages to a marked degree; and

WHEREAS, The success which has crowned medical efforts in Cuba, in abolishing yellow fever in the island, almost banishing malaria from Havana and entirely eradicating malaria as a factor of the death rate of the Army in Cuba, is conclusive evidence that if proper hygienic precautions are taken at Panama and other situations, along the route of the projected interoceanic canal, the death rate of the past can be diminished and practically made to disappear; therefore, be it

Resolved, That, in the judgment of the Association of Military Surgeons of the United States, in annual meeting assembled, the amplest power should be given to the medical officers in charge of the sanitation of the canal, and that, to attain this end, the medical officer in charge should be a member of the commission which the President of the United States is authorized to appoint to conduct the affairs of the canal; and be it further

Resolved, That the Secretary of the Association is instructed to forward this preamble and resolutions, properly attested, to the President of the United States.

Reorganization.

The Committee on Incorporation,, through its chairman, Major William C. Borden, U. S. A., announced that the association was incorporated by Act of Congress, approved Jan. 30, 1903. The association proceeded to reorganize under the law.

Election of Officers.

The following officers were elected for the ensuing year: President, Medical Director John C. Wise, U. S. Navy; vice-presidents, Surgeon-General Walter Wyman, U. S. P. H. and M.-H. S.; Major Albert H. Briggs, surgeon, N. G., N. Y.; Brigadier-General Robert M. O'Reilly, surgeon-general, U. S. Army; secretary and editor, Major James Evelyn Pilcher, U. S. Army, and treasurer, Major Herbert A. Arnold, surgeon, N. G., Pa. St. Louis was selected as the place of meeting for 1904.

Resolutions.

After the induction of the new officers, appreciative resolutions were unanimously adopted in acknowledgment of the courtesies of the citizens of Boston, including the Medical Library Association, Surgeon-General Blood, Captain Myles Standish, Lieutenant F. L. Gibson, Dr. Henry O. Marcy and the host of hospitable and generous people who had contributed so freely to the entertainment of the association.

NEW YORK STATE MEDICAL ASSOCIATION.

Nineteenth Annual Meeting of the Fifth District Branch, held in New York City, May 19, 1903.

The President, Parker Syms, M.D., in the Chair.

Symposium on Malaria.

DR. W. N. BERKELEY opened this symposium with a paper in which he described the three species of anopheles mosquito, and insisted that drainage was the only permanently effective remedy against these pests.

Laboratory Diagnosis and Life Cycle of the Parasite of Malaria.

DR. W. T. KLEIN described the various stages observed in the malarial plasmodium during the endogenous cycle in the human being, and said that the plasmodium was very rarely found free in the blood plasma. The breaking up of the segmenting body and the liberation of the spores were coincident with the rigor. The cycle was completed approximately in forty-eight hours in the tertian variety. The quartan ring was slightly smaller than the tertian, and its pigment granules were smaller and more numerous. Its cycle was completed in 72 hours. The estivo-autumnal form was also smaller and more delicate than the tertian, and it presented two types, one having a cycle of 24, and another a cycle of 48 hours. The parasite of malaria was transferred to man by the bite of the mosquito, and, if the inoculation were successful, which was by no means always the case, malaria usually developed in eight or ten days. Either a dry or a fresh specimen of blood could be made use of for diagnostic purposes, but, whenever possible, it should be taken about eight hours after the chill, because just prior to the occurrence of the chill the malarial plasmodia showed a tendency to retire from the peripheral circulation to the internal organs. A one-twelfth inch oil immersion lens was required for the examination, and a large experience in this field of work had taught him that preference should be given to Goldhorn's staining method, not only because the fixing and staining process could be done in about one minute, but because the chromatin granules were so brilliantly stained as to materially aid in the diagnosis. A marked diminution in the number of red blood corpuscles and in the hemoglobin was a constant occurrence in malaria, and an absence of leucocytosis was likewise a characteristic feature. This was an important point in the differential diagnosis of malaria.

The Concurrence of Anopheles Mosquitoes and Malaria.

MR. HENRY CLAY WEEKS, engineer in economics, discussed this topic. He deplored the prevalent tendency of the people of a malarial region to conceal the true facts, and their dread of taking an active interest in the work of exterminating the disease lest by so doing the locality might get a bad name. It was far better for all concerned to face the truth, and take steps toward the banishment of such a public disgrace. He called attention to a fact often overlooked even by medical men, i. e., that the larvæ of the anopheles are found much later in the season than those of the ordinary mosquito.

Clinical Diagnosis and Treatment of Malaria.

DR. ALEXANDER LAMBERT discussed this phase of the subject. He pointed out that while there were occasional mild cases of malaria in which the attacks only lasted four to six hours, true malaria was generally distinguished from other diseases characterized by chills by the fact that ten or twelve hours were required for the complete cycle. Another distinguishing point was that in malaria, as seen in this part of the world, the pulse did not rise in proportion to the temperature, a temperature of 104 F. often being associated with a pulse rate of less than 100. He quoted Captain Delaney of Calcutta, who had had a very large experience with malaria in that region, as saying that a justifiable diagnosis of malaria was possible in over 90 per cent. of the cases by means of a differential count of the leucocytes. If the large mononuclear leucocytes, i. e., those mononuclear cells which were as large as the polynuclear ones, constituted over 12 per cent., one was warranted in making the diagnosis of malaria. In differentiating malaria from tuberculosis, it should be remembered that in the early stages of the latter disease the temperature usually ranged between 97 and 100 F. In sepsis the febrile and sweating stages were of comparatively short duration and recurred at irregular intervals. In cholelithiasis there was a remittent form. In yellow fever there was a falling pulse, with a stationary or rising temperature. It was often very difficult to distinguish between estivo-autumnal malaria and typhoid fever, but the temperature curve, the history and the other symptoms would usually suffice for such differentiation. The enlargement of the spleen did not occur as early in typhoid as in malaria. The diazo-reaction in the urine in the early days of typhoid was often of assistance. In this latitude many mistakes in diagnosis would be avoided if it were made the rule to exclude malaria, unless the plasmodium were found in the blood. The speaker said that, in his experience, Manson's method of treatment had proved uniformly successful. It is carried out as follows: Five grains of quinin are given every four hours until the temperature returned to the normal, and then three grains should be given three times daily. At the same time the patient should take daily a drink made by cutting up the rind, pulp and seeds of a lemon, placing them in one quart of cold water and boiling this down to one pint. This drink should be taken daily for four months. It should be strained before taking, and could be sweetened as desired. After three weeks the patient should take a calomel purge, and then three grains of quinin three times daily for one week. This week of medication should be repeated at the end of the month, and at intervals of a month thereafter for four or five months. The hydrochlorate of quinin contained more of the alkaloid and was more soluble than the ordinary sulphate of quinin.

DR. FRANCIS P. KINNICUTT did not think that clinical experience had proved this treatment of Manson to be so effective

as that of Ross, which was as follows: Ten grains of quinin are given every two hours for the first fortnight, 15 grains daily for the next fortnight, ten grains for the second month, 5 grains for the third month. The dose should be increased from five to ten grains at first twice a week, and later at weekly intervals. The treatment should be invariably continued for four months, even though no relapse occurred. Where a person was unavoidably exposed to infection, an excellent prophylactic treatment consisted in taking five grains of quinin daily, increasing the dose to ten grains twice a week.

DR. DAVID P. AUSTIN called attention to the strong tendency to relapses at intervals of a week for the first month, as well as to the value of combining quinin with calomel and capsicum.

DR. W. I. COCKE of Port Washington, L. I., described his favorable experience with nuclein in the treatment of malaria.

Officers Elected.

The following officers were elected: President, Dr. J. C. Bierwirth, Brooklyn; vice-president, Dr. Milton C. Conner, Middletown; secretary, Dr. E. V. Hubbard, New York City; treasurer, Dr. Henry Dodin, New York City.

GERMAN CONGRESS OF SURGERY.

The thirty-second annual congress of German surgeons was held at Berlin, June 3 to 6, and a number of interesting communications were presented. Prof. G. Gaertner, Vienna, inventor of the "tonometer," exhibited a somewhat similar instrument for watching the pulse during narcosis. It is worn on the wrist like a bracelet, and an index registers the pulse on a large dial. Narath, Utrecht, presented a "gastrophor," a device to aid in operations on the stomach and to dispense with an assistant. An exposition of surgical appliances contained the new instruments, nearly all of which seem to have been described in THE JOURNAL during the last year. Kraske, Freiburg, expatiated on the

Dangers of Raising the Pelvis

in operating, and cited several instances from his own experience in which the Trendelenburg position had entailed fatal consequences. Paralysis of the anterior tibial nerve and emphysema of the abdominal walls are not serious and can be avoided. He refers more particularly to the disturbances in the circulation in obese subjects. In two patients of this group, with signs of myocarditis, an operation on the bladder under ether was followed by heart failure the next or the fifth day. He thinks that this fatal result was due to the increased blood pressure and consequent dilatation of the heart. In three cases occlusion of the intestines followed a laparotomy with the pelvis raised. One patient spontaneously recovered after five days of ileus. In another, a still more tempestuous case, the entire omentum was found rolled up under the liver, the colon adherent to it, and completely occluded. The conditions were relieved by a laparotomy, but the patient soon succumbed. Schauta has reported two cases of torsion of the small intestine in consequence of the Trendelenburg position, and insists that the viscera should all be carefully restored to their normal places before closing the abdomen. In a third case the raising of the pelvis caused severe post-operative hematemesis. Trendelenburg, Leipsic, in the discussion that followed, called attention to still another danger, suffocation from aspiration of vomited matters when the stomach is not empty as the operation is commenced. He has lost a patient from this cause. König, Berlin, warned against the slanting position in operating on intraperitoneal abscesses for fear that some of the contents may escape into the upper parts of the abdominal cavity.

Küttner, Tübingen, proclaimed that he had saved laboratory animals, otherwise doomed, by intravenous injection of a saturated

Oxygenated Saline Solution,

and exhibited an apparatus he had devised for the purpose. He found inhalation of oxygen under pressure an effective measure, especially when combined with the intravenous injections.

Massage in Recent Fractures.

Jordan, Heidelberg, has found in 100 cases that early massage and application of a splint after each massaging resulted in more rapid and better functional and anatomic cures than he had ever attained by other measures. Even when immobilization is necessary, it should always be preceded by massage, and be restricted to the minimum.

Cancer in Digestive Tract.

Petersen, Heidelberg, affirmed that cancer in the rectum has a tendency to bore into the depths, while gastric cancer spreads by predilection on the mucosa, and is shallower. He also claims that some of the cancer cells are destroyed in the lymph glands. He makes a practice of extensive resection of the stomach but does not think it necessary to remove all the glands in the region. In 30 cases of resection of the stomach at Heidelberg, on account of cancer, 7 of the 18 who survived the intervention are still alive.

Paraffin Prothesis for Hernias.

Eckstein, Berlin, advocated treating inguinal and umbilical hernia by this means, but Gersuny, the inventor of the measure, emphatically denounced this application of it. The hernia is not cured, but merely concealed behind the paraffin. Others, however, have been successful with it, injecting paraffin with a melting point of 40 C. into the hernia sac after reduction of its contents.

Operative Treatment of Epilepsy.

Kümmell, Hamburg, stated that he had treated 30 cases of epilepsy by Kocher's method of draining the ventricle. The epilepsy vanished as long as the drainage continued, but returned as soon as it was suspended.

Esthetic Ablation of Lymphomata in Neck.

Dollinger, Budapest, has been very successful in removing these tumors without a scar or recurrence. He works through an incision in the edge of the hair, and has even succeeded in removing supraclavicular ganglia by this route. Out of 128 operations of this kind there was slight post-operative suppuration in only 21, and it was not tuberculous, and healed as soon as a small drain was introduced at a counter-opening. There has been recurrence in only 2 of the entire number.

Suture of the Heart.

Four surgeons reported direct suture of the heart, one having done it in 3 cases. All of the 6 patients recovered except 2, and Rehn mentioned that his patient operated on six years ago is in good health to-day.

Treatment of Cavernous Angioma with Magnesium Darts.

Payr, Gratz, reported that a cavernous angioma on the cheek was very much reduced in size by his method of introducing magnesium darts. He inserted 42 in six sittings. The little darts are soon absorbed, but they induce the formation of compact connective tissue with thrombosis and obliteration of the spaces. The vascular tumor is thus reduced to an insignificant size, or its extirpation is rendered easy without fear of hemorrhage. He has thus treated 8 or 9 cases with complete success.

Recovery After Impalement.

Franke, Brunswick, described a remarkable case of complete transverse perforation of the thorax. A woman fell from a height on a broom handle, which entered at the right axilla and emerged in the other. He saw the patient soon after the accident, and found considerable emphysema of the subcutaneous tissue, progressive dyspnea, a wound in the right axilla and a very tender point in the left axilla, the region which seemed to be the starting point for the emphysema. He had the patient taken to his ward at once and made an incision in the left axilla through which he could palpate with his fingers a perforation of the thorax wall in the third interspace. The lung had evidently retracted from the thorax wall, and in order to avoid pneumothorax he tamponed the wound at once. He then inspected the right axilla, and found here likewise a perforation of the third interspace, and he tamponed this also. The patient had quite recovered in fifteen days. He adds that the blood stains on the broom handle corresponded exactly with the transverse diameter of the thorax. It must have pushed back the heart and lungs without injuring them.

The *Semaine Médicale* of June 10 and 17 contains an elaborate report of the congress. Most of our German exchanges are publishing the "collective report" in installments.

MONTANA MEDICAL ASSOCIATION.

Twenty-fourth Annual Meeting, held at Helena, June 17 and 18, 1903.

Dr. T. J. McKenzie, Anaconda, President, in the Chair.

An address of welcome was delivered by Mayor Frank J. Edwards of Helena, which was fittingly responded to by the president of the association. After roll-call and the admission of sixteen new members, a good scientific program was taken up and discussed.

The following officers were elected for the ensuing year: President, Dr. Louis Bernheim, Butte; vice-presidents, Drs. Donald Campbell Butte; George H. Barbour, Helena, and E. F. Conyngham, Phillipsburg; secretary, Dr. Ben C. Brooke, Helena; treasurer, Dr. Isadore D. Freund, Butte; councilors, Drs. Thomas J. Murray, Butte; G. T. McCullough, Missoula; T. J. McKenzie, Anaconda; Ernest Crutcher, Great Falls; Charles F. Hopkins, Chinook; W. B. Kingsbury, Dillon; William C. Riddell, Helena; Alexander D. McDonald, Kalispell; Robert D. Dalton, Livingston, and James Chapple, Billings. The next meeting of the association will be held at Butte on the second Wednesday and Thursday of May, 1904.

Dr. John A. Donovan, Butte, introduced the following resolution, which was adopted:

Resolved, That the Medical Association of Montana approves the plan of examination of eyes and ears of all school children as recommended and practiced by the Illinois State Board of Health and approved by the American Medical Association and many other organizations. That we recommend said plan to our state board of health and board of education for their approval and action. That hereafter every child will be carefully examined by the teacher at least once a year and records made according to the prescribed simple forms printed for this purpose. That the parents of any child who is found defective in sight or hearing be notified, that said parents may act as they see fit.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the disease seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Sulpho-Carbolate of Zinc in Cholera Infantum.

Dr. W. F. Waugh, in the July number of *Alkaloidal Clinic*, recommends sulphocarbolate of zinc in infantile summer diarrhea and in cholera infantum. His routine treatment is to clear out the bowels with castor oil, calomel, mercury and chalk, aromatic rhubarb, lavage or colonic flushing as seems best in each case. This is followed by the zinc salts every hour in 1/6 to 2 gr. doses. It is given in solution or powder form, and, in cases of decided irritability, combined with pepsin and bismuth. When there is extreme acidity marked by rectal excoriation, sulphocarbolate of sodium is substituted.

Diarrhea.

The *Jour. of Tropical Med.* quotes the following combinations in the treatment of diarrhea:

℞. Tinct. camphoræ ..... ʒi 4
Tinct. capsici ..... ʒss 2
Tinct. lavendulæ co. ..... ʒii 8
Spts. vini gallici q. s. ad ..... ℥ii 60
M. Sig.: One teaspoonful every two or three hours.

In the treatment of chronic summer diarrhea the following combinations are recommended:

℞. Bismuthi subgal. ..... gr. xxiv 1.60
Pulv. opii ..... gr. ss .03
Pepsini pulv. ..... gr. vi .40
M. Ft. chart. No. xii. Sig.: One every four hours, alternating with the following:

℞. Hydrarg. chloridi mitis ..... gr. ss .03
Cerii oxalatis ..... gr. ii .12
Sacch. albi q. s.
M. Ft. chart. No. xii. Sig.: One every four hours.

Pustular Acne of the Face.

According to Leredde, in an abstract in *Amer. Med.*, an acne developing on a sensitive skin, as in women, should not be confounded with an acne developing on a thick skin, which is but slightly sensitive, when the treatment is being considered. He regards sulphur as the best remedy, but its action depends not so much on any special property of the sulphur as on the excipient combined with it. He, therefore, makes two classifications of excipients: First, those that tend to congest the skin, obliterate the glands, and prevent cutaneous perspiration. (In this class he includes the fats.) Second, the agents which decongest the skin and facilitate cutaneous perspiration, such as powders and pastes. The latter are employed when the skin is sensitive.

The following combinations may be of service:

℞. Sulphuris precip. ..... ʒv 20
Saponis nigri ..... ʒiiss 10
Acidi pyrogallici ..... ʒi 4
Zinci oxidi ..... ʒi 30
Liq. petrolati ..... ʒiii 90
M. Sig.: Apply locally at night.

The parts should be washed thoroughly with salicylated soap before applying the ointment. If the skin is hard, the paste may be left on over night and removed the next morning. In women the paste should be removed at the end of two hours. According to the author, larger amounts of the sulphur can be used, and are borne better when prescribed as a paste than when prescribed with simple fat.

When the skin is not sensitive the following ointment may be employed:

℞. Sulphuris precip. ..... ʒi 4
Hydrarg. chloridi mitis ..... ʒss 2
Lanolini ..... ʒv 20
Liq. petrolati ..... ʒiiss 75
M. Ft. unguentum. Sig.: To be applied locally.

The general condition of the patient must be carefully inquired into and properly corrected if possible. Especially must gastric disturbance be avoided.

Neurasthenia.

The following combinations are of value in the treatment of neurasthenia:

℞. Ferri glycerophosphatis
Sodii glycerophosphatis, āā ..... ʒi 4
Berberinæ phos. ..... gr. xii .75
M. Ft. capsulæ No. xxiv. Sig.: One capsule before each meal.

When pronounced anemia is present the following combination containing arsenic and iron should be prescribed:

℞. Acidi arsenosi ..... gr. 2/3 .04
Ferri sulphatis ..... ʒi 4
Ext. nucis vomicæ ..... gr. vi .40
Potassii carbonatis ..... ʒi 4
M. Ft. capsulæ No. xxiv.

The lecithin preparations, made from the yolk of the egg, are regarded by some as exerting specific action in this disorder. It may be prescribed in one of the following forms:

℞. Glycerol lecithin ..... ʒii 60
Sig.: One-half teaspoonful after each meal, gradually increased to one teaspoonful three times a day: or;

℞. Pil. ovo-lecithin ana ..... gr. iii .20
No. xxiv. Sig.: One pill three times a day after each meal.

Phosphorus combined with zinc makes a good combination to be used in some cases:

℞. Phosphori ..... gr. ss .03
Zinci valerianatis ..... ʒi 4
M. Ft. pil. No. xxx. Sig.: One pill after each meal. If the patient suffers from insomnia the following should be given at bedtime:

℞. Sodii bromidi ..... ʒv 20
Tinct. hyoscyami ..... ʒiv 15
Elix. simplicis q. s. ad ..... ℥ii 60
M. Sig.: One teaspoonful at bedtime, for sleep, and repeat in one hour if necessary.

It must not be forgotten that autointoxication is present as a causative or aiding factor in many of these neurasthenic cases. Consequently the alimentary tract must receive proper

attention by keeping the bowels freely open, either with saline purgatives or small and repeated doses of calomel. Intestinal antiseptics are valuable, such as salol, thymol or creosote in small doses. Hydrotherapy, prescribed to suit the individual case, is indicated. It may be administered in the form of baths, douches or sprays.

Medicolegal.

Liability of Company for Malpractice After Fraud.—The Court of Civil Appeals of Texas holds, in Jones vs. Railway Company, an action brought to recover for personal injuries received by the wife of the party suing, that oral evidence would be admissible to show that, as an inducement for the party suing to execute a release to the company, the latter undertook to have his wife further treated by its physicians and to pay her board bill. If the company furnished medical treatment to the wife in consideration of the execution of the release, it would be liable for unskilful treatment, although the release should be set aside on account of fraud in its procurement.

Five Thousand Dollars for Injury to Spine.—The case of Sweeney vs. The New York Central & Hudson River Railroad Company was brought by a young woman who was at the time of the trial 22 years of age to recover for alleged permanent injuries to her spine. The extent of her injuries was a sharply contested point. Several witnesses beside the woman herself, and including two physicians, were sworn to sustain the contention that such injuries were very severe. On the other hand, evidence was given in behalf of the company to the effect that her claims in reference thereto were greatly exaggerated. Under these circumstances the Fourth Appellate Division of the Supreme Court of New York does not feel that the evidence warranted it in disturbing a verdict in her favor or feel willing to say that one for five thousand dollars was excessive.

Cases of Privilege.—The Second Appellate Division of the Supreme Court of New York says, in the case of Duggan vs. Phelps, that it is held that what is seen by a physician in looking at the patient is within the privilege (Grattan vs. Metropolitan Life Ins. Co., 92 N. Y., 274); that it is not necessary that the physician should be employed by the patient, or that there should be a contract relation between them (Renihan vs. Dennin, 103 N. Y., 573); that the party suing, by calling his physician to testify as to his disease and its treatment, does not waive his objection to the evidence of other physicians who had treated him at other periods (Hope vs. Troy & Lansingburgh Railroad Company, 40 Hun., 438, affirmed in 110 N. Y., 643); and that although a patient gives evidence as to his condition both before his entrance to a hospital and after he leaves it, he does not waive the privilege as to a physician who treated him in that interim (Barker vs. Cunard Steamship Company, 91 Hun., 495, affirmed in 157 N. Y., 693). In the present case, the party suing for damages for personal injuries testified that after the accident he was taken in an ambulance to a hospital; that he left there the next day, and was thereafter treated at home by his own physician, who testified in detail as to the injuries and the treatment. The other party called the ambulance surgeon, who had charge of the party suing and treated him in the hospital. The court holds that the calling of his own physician as a witness was not a waiver of privilege as to the ambulance surgeon. It distinguishes the case from Green vs. Metropolitan Street Railway Company (171 N. Y., 201, page 45 of THE JOURNAL of July 5, 1902), and Griffiths vs. same company (171 N. Y., 106, page 103 of THE JOURNAL of July 12, 1902), by the fact that the ambulance surgeon testified that he had charge of the party suing, and recalled what he did for him, and that he treated him after he came to the hospital, after which he was asked to state his condition at the time that he "first saw him, that he treated him." It says he was therefore asked to speak in the relation of physician to patient.

What Deemed a Bodily Infirmity—Pension as Evidence.—The United States Circuit Court of Appeals, Third Circuit, holds, in the case of Black vs. the Travelers' Insurance Company, that an infirmity of the body, as the term implies, is something that materially impairs the bodily powers. In a case where this is clearly made out, it is no doubt the duty of the court to take the question from the jury and dispose of it; but ordinarily it is for them to pass on. For example, in this case an applicant for insurance warranted that he had never had "any bodily or mental infirmity." It was proved, however, that while a soldier in the Civil War he received a gunshot wound in the back of the head, by which the external table of the skull was fractured, a piece about half an inch square taken out, and a slight depression of the inner table produced. On the strength of this, in December, 1868, he was granted a pension by the United States government of $8 a month, which was increased to $12 in July, 1886, and in December, 1889, to $14 on account of alleged resulting vertigo and impaired vision. But, aside from the pension record, there was nothing to show that the wound, which healed over quite speedily, materially affected the general health of the insured, which, according to the testimony of several witnesses, was uniformly good; and the court holds that the question of whether the condition produced by the wound was a bodily infirmity within the warranty, and constituted a breach of it, should have been left to the jury. In other words, it holds that an injury or infirmity, the existence of which constitutes a breach of such a warranty, must be such as amounts to an actual inroad on the physical health or condition of the insured, and that this, as a rule, is a question for the jury. The mere reception of a pension, it holds, did not establish that he was affected with a bodily infirmity, but only that it had been so represented by him to the pension department. However far in that direction this may have gone it was not conclusive on the question of the existence of a disability regardless of the other proofs. Even on the most disadvantageous showing it amounted to no more than a declaration or statement by the insured, which, like any other, it was for the jury to consider and pass on along with the other evidence.

Prescriptions Under Local Option Law.—By the Texas constitution the legislature is required to pass a "local option law," which is restricted to a prohibition of the sale of intoxicants. Article 405 of the penal code, in substance, prescribes the punishment against all parties who undertake to give prescriptions in local option territory, except regular, practicing physicians, and against them if they should give prescriptions without a personal examination of the applicant, which personal examination must disclose the fact that the applicant is sick. But the Court of Criminal Appeals of Texas holds, in Stephen vs. State, that the legislature has no authority to punish a party for giving a prescription to himself. No more could he be punished for giving a prescription to a third party. The legislature has not been authorized by the constitution to prohibit the giving of prescriptions. This is not a sale, nor can it be tortured into a sale. It may be admitted that it contemplates the purchase of the intoxicant, but it is not a purchase or a sale. The information in this case did not charge a sale. It simply charged the giving of a prescription for the purpose of obtaining intoxicants. That a physician may be guilty of violating the local option law by means of giving a prescription may be conceded, though it would not be for giving a prescription, but for bringing about the illegal sale. Cases can be well imagined and readily conceived where a physician, for the purpose of assisting the seller in making the sale, would become particeps criminis in the sale. Or if the physician, without connivance or complicity of the seller, should, by means of a prescription, or any other means, use the seller as an innocent instrument in violating the local option law in the sale, then he (the giver of the prescription) would be guilty under the statute. In such instances he would, were the case a felony, bear the relation of an accomplice to the crime, but, being a misdemeanor, he would be a principal. But there must be a sale alleged and proved in order to make a violation of the local option law. The court adds that it is not discussing what it would take to constitute a sale, but only holds that a party can not be convicted of violating the local

option law until he has been instrumental criminally in bringing about a sale of the intoxicants within the prohibited territory. This must be alleged. And it holds that the information in this case did not charge an offense.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 27.

1 *On Septic Thrombosis of the Roots of the Portal Vein in Appendicitis and on Pylephlebitis, Together with Some Remarks on "Peritoneal Sepsis." Arpad G. Gerster.
2 The Late Dr. T. Gaillard Thomas. Henry D. Nicoll.
3 *A New Blood Stain. George L. Laporte.
4 *Feeding of Older Infants and Children. W. M. Hartshorn.

1.—See abstract in THE JOURNAL, xl, p. 1595.

3. **A New Blood Stain.**—Laporte describes his method of staining as follows:

First, make a .5 per cent. solution of Jenner's powder (Gruebler's) in methylic alcohol (Merck's highest purity). Do not filter this solution. Second, make a solution of one part Unna's polychrome methylene-blue solution (Gruebler's) to 150 parts of distilled water (about 2 drops to 15 c.c.). Then proceed as follows: Take the cover-class specimen in a Cornet forceps, drop on it 5 drops of Jenner stain, allow this to act one minute, then without removing the Jenner stain, pour on 10 drops of the dilute polychrome methylene-blue solution. Agitate the forceps so as to produce a thorough mixing of both solutions on the cover-glass. Allow the combined stain to act five minutes longer. Then wash off with distilled water and allow some of this to rest on the cover-glass about one minute longer with occasional agitation of the forceps. At the end of this time dip the specimen rapidly into a very dilute acetic acid solution (about 1 drop of 50 per cent. acetic acid to 10 ounces of water) until it is of a reddish or pinkish color. Rinse again with water and dry in the air. Do not employ heat or filter-paper to dry specimen.

This stains red blood corpuscles a distinct pale rose color. The nuclei of the white as well as of the red cells are of a bright carmine purple and the eosinophile granules are of a bright coppery red, the mastzellen granules of a very deep metachromatic blue. The protoplasm of the large and small lymphocytes is a pale light blue dotted here and there with bright purplish chromatin granules. The network of the blood plates takes the carmine purple chromatin color, the bodies of the blood plates staining a light blue. The body of the malarial parasite is stained blue, its chromatin the same as the nuclei of the white cells, only brighter. Granular degeneration of the red cells appears as fine blue specks in the affected cells. A few minor details must be observed. The specimens should not be fixed in any way and should not be too old. The time given for the Jenner (one minute) and the combined stain (5 minutes) should ordinarily be strictly adhered to. There should always be double the number of drops of dilute polychrome methylene-blue solution to the three or four drops of the Jenner solution. The former should not be added drop by drop, and it is always necessary that the distilled water should be left on the cover glass a minute longer after rinsing off the stain.

4. **Infant Feeding.**—All infants over seven months old, artificially fed in the Nursery and Child's Hospital, New York, during the past four months were given stronger food, especially stale bread, soaked in boiling water until thoroughly softened, when the water was poured off and a cup of milk added, and this boiled for three or four minutes. After being sweetened and cooled sufficiently, it is fed to the baby. At first a teaspoonful once a day is given, but as the infant becomes accustomed to it, the amount is increased so that at the end of ten days it is receiving one to two or three ounces daily. It is given between the regular bottle hours, and never more than half an ounce at a time. If curds appear in the stools or if it disagrees, it is discontinued and castor oil or calomel given. Older children ranging from eighteen months to four years, are all fed on plain bread and milk, with no extra preparation, at least once a day. In the morning they receive farina with milk. At noon boiled rice, with meat broth poured over it, is given to them. For supper they receive plain bread and milk, the older children often receiving some plain jelly spread over their bread. During the fruit season they are allowed an orange or some easily digested fruit at noon. Since they have been giving this extra food for the younger children and infants Hartshorn says they have noticed a marked change in the general appearance of the weight charts for the better.

American Medicine, Philadelphia.

June 27.

5 *The Relation of Neuralgic Headaches to Storms. S. Weir Mitchell.
6 A Case of Endothelioma of the Mammary Gland. J. Chalmers DaCosta.
7 *Erythropleum: A Clinical Study. Reynold W. Wilcox.
8 *Chronic Cyanotic Polycythemia, with Notes on Two Cases. J. N. Hall.
9 *A Further Study of the Influence of the Contents of the Large Intestine on Strychnin. William Salant.
10 *A Rapid and Easy Method for the Sterilization of Catgut Ligature and Suture Material. John Milton Garratt.

5. **Neuralgia and the Weather.**—Mitchell calls attention to his earlier work, and that of others on the influence of the weather on pain. He remarks that eyestrain is rarely the primary trouble; it may lead up to or exaggerate the force of the attacks, but atmospheric conditions have a potent share in the production of migraine. He has been able at different times to convince himself that certain migraines were due to storms, but not, as a rule, to the summer electric storms, which may, nevertheless, in some hysterical women occasion a general headache, distinct in character from hemicranial attacks. He briefly reports a case and gives the curve showing the monthly average of headaches for seven years in connection with the storm curve, which are strikingly parallel.

7. **Erythropleum.**—This substance, which is the bark of a tree, the Erythroploeum guineense, one of the Leguminosæ and known in Africa as the gidu, mancona, doom, ordeal, casca, saucy and sassy bark. Its mode of action is that of a muscle-poison, acting on the heart earlier because it receives a larger quantity of poisoned blood. On the vagus its action resembles digitalis. It is a vasoconstrictor by acting on the vessels themselves, the vasomotor nerves or on some vasomotor center not contained in the medulla. The respiration is influenced through the pulmonary branches of the vagus. It is an irritant to the nasal mucous membrane, causes vomiting by reason of its solutions possessing the same property, and is diuretic like digitalis. He gives the result of its use clinically where its field of use seems limited to the heart and blood vessels when cardiac disease is not accompanied by dropsy. Its power to slow the heart is rather greater than that of digitalis, but it is more decidedly a gastric irritant. Its vasoconstrictor properties are practically those of digitalis and ergot combined. Its cumulative power is rather less than that of digitalis. The indications for the use of the remedy are those which Withering laid down in the eighteenth century for digitalis, namely, a rapid, low tension pulse with venous congestion. Digitalis, however, is rather more reliable and constant. The use of this remedy should be confined to those cases of fairly competent heart of low vascular tension in which it will show its effects more rapidly and markedly, and to those cases in which digitalis has lost its usefulness or has utterly failed.

8. **Chronic Cyanotic Polycythemia.**—This title is offered as a tentative designation for certain cases recently reported of chronic cyanosis with immense increase in the number of red cells and without cardiac disease. Two cases observed by Hall are reported, in one of which there was a well-defined chronic nephritis with cardiac manifestations. A striking characteristic is the intense cyanosis, giving the lips and tongue the color of ripe Concord grapes. This is somewhat less marked on the hands and still less on the trunk and lower extremities. The dyspnea and palpitation that existed were more striking than in the other cases quoted. He accounts for them by insufficient oxygenation in spite of the increased number of red cells. He thinks it is possible that the increase in the reds is a compensatory process—an attempt to make up the deficiency in oxygen-carrying capacity in individual cells by an increase in their number.

9. **Strychnia.**—Salant has investigated the action of the contents of the large intestine on strychnia, and finds that the simpler methods for the detection of strychnia are more certain in its detection. He accounts for this by the manipulations that are required by the more complex tests and reagents, some of them carrying off portions of the strychnin.

10. **Catgut Sterilization.**—The technic of the method employed by Garratt is given by him as follows:

Have ready one two-quart and one one-quart clean fruit jar for each size of the material used. It is well to have an extra one-quart jar for use in preparing a fresh batch when one on hand is nearly used. The jars must be thoroughly cleaned beforehand and sterilized by boiling or dry heat. The various sizes of catgut can be purchased from any reliable firm dealing in surgical supplies. The sizes found most convenient are 00, 0, 1, 2 and 3. The first three sizes are cut into lengths of about ten inches and used for ligatures and sutures; the last two, 20 inches—used for pedicles, etc. For convenience, a piece of wood 10x3x¼ inches is obtained, and both ends cut to a point and notched at intervals of one-quarter of an inch for catching the ends of the strands. After winding lengthwise, cut the smaller sizes at both ends of the board; the larger at one end only. Three strands of a similar size of the short lengths are placed in an envelope of unglazed paper, a convenient size being 3x1¾ inches. Two strands of a similar size of long lengths are likewise placed in envelope. Seal and mark with an indelible pencil the size number on the outside of the envelope. The number should be made large enough to be plainly seen. It does away with the necessity of putting germ-catchers on the outside of the jar. Envelope and contents of similar size are kept in a two-quart jar until wanted. Sterilization is accomplished by placing 40 or 50 envelopes and contents in a one-quart jar and completely filling it with the following germicidal solution:

Mercuric chlorid	gr. xv	1
Tartaric acid	gr. lxxv	5
Columbian spirits		
Ether, āā	1 pint	473

Put on the cover and screw it down tightly. Allow size 00 to remain in the solution for four hours; size 0, six hours; size 1, eight hours; size 3, twelve hours. After the material has been immersed for the desired time, pour off the solution and drain, then cover envelopes and contents with columbian spirits, screw on the cover, and put away in a clean place until wanted. It is essential that columbian spirits be used. Ethyl alcohol can not take its place, even when the absolute alcohol is used. Columbian spirits is a pure methyl (wood) alcohol practically free from water. It is inexpensive, costing less than the ordinary alcohol. It can be obtained usually at paint stores. It serves to toughen the catgut, acting much the same way as does formalin. In removing the envelopes from the jar use a pair of vulsella forceps kept expressly for this purpose. Thread the needles, then place in recently distilled water. Catgut prepared by this method possesses all the requisites of a good ligature and suture material—strength, pliability, and most important, asepsis. The technic of sterilization is easy to carry out, and it is inexpensive. The very minute quantity of mercuric chlorid remaining in the material overcomes the theoretic objections to its use.

He also remarks on the possibility of infection of cocain solutions, and at the suggestion of Dr. Lee H. Smith makes the solutions up from the dry ingredients, placing them in glass-stoppered one-dram bottles. Just before operation the bottle is filled with a boiling decinormal salt solution. When a bloodless field of operation is desired a 1 to 10,000 solution of adrenalin chlorid is used in its place, the nitroglycerin being omitted. The small bottles are kept in a specimen jar tightly covered until wanted. Since using this solution and the catgut ligature and suture material prepared as above, some 200 operations have been performed without a single suppuration.

Medical News, New York.

June 27.

11 *Poisoning by Corrosives. Eli H. Long.
12 *Appendicostomy (Weir) for the Treatment of Chronic Ulcerous Colitis. Willy Meyer.
13 *Note on a Case of Mycosis Vaginæ. Allen J. Smith and O. H. Radkey.
14 Cast from a Case of Membranous Croup. Everett J. Brown.
15 Report of a Case of Rupture of the Uterus; Laparotomy; Recovery. Nutting Fraser.
16 Neuritis Following Ludwig's Angina; Report of Case. Charles J. Aldrich.
17 Report of a Case of Stammering, and Method of Treatment. James M. Brown.

11. **Corrosive Poisoning.**—Long discusses the corrosive poisons, and insists particularly on the chemical basis of their action and the selection of antidotes on the same basis. He would also first insist on the importance of immediate dilution of the poison with a large quantity of water, independent of the nature of the corrosive. This is always practicable.

12. **Appendicostomy (Weir).**—A case of this new operation is reported by Meyer, where a soft rubber tube was passed through the appendix and the bowel regularly flushed with nitrate of silver solutions to treat the ulcerations that existed throughout the entire course of the transverse and ascending colon. Under the treatment the health of the patient has materially improved, though there is still some ulceration in the rectum. She has gained over 15 pounds. The cut end of the appendix is flush with the skin, and there is no granulating surface requiring dressing and no leakage whatever on removal of the tube. There is a little appendicular fistula which acts exactly like the artificial openings made by Kader's and Witzel's methods, contracting rapidly when the tube is removed. Once when flushing was done every other day the tube accidently slipped out, and at the next dressing the appendix was so contracted that it took long and tedious work to reintroduce the tube, thus showing that all that is needed to close the opening is to leave out the tube. If this does not promptly follow, cauterization with Paquelin's cautery will surely accomplish the desired result. Dr. Meyer has little fear of inflammation being set up in the misplaced appendix. It is, as it were, hung up with natural drainage into the cecum. Should it really become inflamed it would be of little consequence as it passes through the abdominal wall in all its length, where it can do no harm, the peritoneal cavity having been long shut off by adhesions. He suggests that this method of using the appendix might be of value in some cases of cancerous stricture. The appendix might be pulled forward to relieve the distended intestinal tract, and stitched into the wound and made use of as indicated. It is probable, of course, that we may rarely meet old patients with an appendix of a caliber sufficiently large to carry out this plan. Still he intends to try it in his next case of obstructive ileus in an old and weakened patient. He thinks the operation is a valuable addition to our operative methods.

13. **Mycosis Vaginae.**—In the patient here described there was intense leucorrhea with vulvar burning and pruritus. Direct examination showed the presence of follicular vulvitis and at a later attack the walls of the vagina were found covered with great numbers of grayish brown, slightly elevated masses, easily detachable, with raw surfaces under them. Examination revealed the presence of fungi, Oidium albicans or thrush fungus. The authors review the papers on the subject, and think that in view of the absence of the subject in American text-books (definite recognition of the condition has been found only in Reed's work) that a report of the case is justified.

New York Medical Journal and Philadelphia Medical Journal (Consolidated).

June 27.

18 *Gonorrhea Insontium, Especially in Relation to Marriage. (To be concluded.) Prince A. Morrow.
19 *State Care of the Feeble-minded. Martin W. Barr.
20 Interstitial or Tubouterine Gestation Complicating Uterine Pregnancy, Abortion of Both Fetuses Three Weeks Apart. J. B. Morrison.
21 *The Ignition of Ether Vapor in Presence of a Closed Electric Light. Dwight H. Murray.
22 Pertussis with Unusual Cerebral Symptoms. Edwin E. Graham.
23 *The Application of Hospital Methods for the Prevention and Treatment of Puerperal Sepsis to Private Practice. William S. Stone.
24 *Prophylactic Injections of Tetanus Antitoxin in Cases of Wounds from Toy Pistols. Fielding L. Taylor.
25 *Surgery of the Prostate from the Standpoint of Personal Experience. Being the Oration in Surgery. (Concluded.) Granville MacGowan.

18.—See abstract in THE JOURNAL, xl, p. 1602.

19. **The Feeble-Minded.**—Barr considers that the defective or feeble-minded have been comparatively neglected while the state has been caring for the criminal and the insane. The

rapid increase of this class makes them a problem which must be attended to. Of the three classes, the untrainable idiot, the untrainable imbecile and the cunning and treacherous moral imbecile, the idiot is the most harmless and most easily disposed of. An asylum where he can be cared for under medical supervision is all that is required. Such an institution can be run very comfortably on a comparatively moderate income. The idiots can be taught, at least the better class of them, to be useful, to do household services and help in the care of others. The adult idiot or imbecile here can also have a peaceful home. A training school for backward children or the feeble-minded is a very different affair. High-grade imbeciles can be trained for certain employments, such as musicians, cabinet-makers, painters, seamstresses, carpenters, etc. Barr, however, points out the consequences of discharging such cases from the public care when they appear to have recovered. The immediate result is marriage and increase, for imbeciles they are still, though this may be imperceptible to the friends and the public, and it is transmissible. The moral imbecile is another difficult problem, and in the highest grades they are dangerous persons, capable of doing immense harm. For training imbeciles he believes in the colony system. They should never be turned out on the world, and on their own responsibilities.

21. **Ether-Vapor Ignition.**—Murray reports a case where ether vapor seemed to become ignited in the presence of a closed electric light, which he thinks was due to the electric spark. There was no other possible apparent cause. He has tried to experimentally reproduce the condition, but without success, in obtaining ignition. The fact that it has once occurred is of importance, and the surgeon or anesthetist should be on his guard.

23. **Puerperal Sepsis.**—Stone details the hospital methods that he thinks advisable in private practice. Some of these are difficult to put into practice, such, for instance, as shaving the vulvar hairs, etc. The principal thing, however, is the care of the hands, and he has used gloves in his private practice for two years with the greatest satisfaction. He thinks by their general use the morbidity of puerperal infection can be reduced at least one-half. He concludes with some remarks on the treatment of puerperal infection and insists on the importance of accuracy of diagnosis, recognition of the initial chill and careful examination of the pelvic organs at the initial period of the disease. As soon as the fever appears, excluding the breasts and constipation as causes, the patient should be transferred to a table and placed in the lithotomy position, with or without anesthesia, according to the circumstances, and after sterilization of the attendant's hands and external genitals, a systematic examination beginning with the perineum should be made. Until he adopted this method he was altogether unaware of the frequency in which infected wounds below the placental site were the cause of the trouble. It is a very common error to give an intrauterine douche before thorough examination, and in many cases transference of the infection to the placental site is caused by our initial efforts at treatment. The parts are examined upwards from the perineum to the fundus of the uterus with the greatest care, and wherever wounds are found they are aseptically treated with irrigations of sterile salt solution, which is sufficient in most cases to produce healing and disappearance of general symptoms. Retained discharges may be found to be the cause. If there are putrid remains of gestation products, these may be removed by the fingers supplemented by the use of some dull instrument. A common error is to mistake the roughened placental site for retained gestation products. Washing out the cavity with hot saline solution is usually sufficient; he protests against the use of antiseptic douches. The more radical procedures, such as hysterectomy, are indicated in very few instances. If cellulitis or peritonitis is present, an ice bag to the abdomen, followed later by prolonged and hot vaginal douches, aids in the absorption of exudate. If an abscess is present it is opened in the most accessible region.

24. **Tetanus Prophylaxis.**—Taylor advises the use of prophylactic injections of tetanus antitoxin in cases of toy pistol wounds. It has been the custom for the last two years at the Hudson Street Hospital in New York to inject 10 c.c. in each patient, and they are now practically rid of tetanus from this class of wounds.

25. **Surgery of the Prostate.**—MacGowan, in this concluding section of his article, notices the inconveniences of suprapubic operation and the possible dangers of urinary infiltration with hemorrhage, irregular cicatrices, deformity of the bladder neck, etc. Leakage of the suprapubic wound is annoying and may last for weeks. The difficulties of the perineal operation are not usually great. Its perils consist: 1. In the making of an irregular tear in the bulbous urethra by the assistant who holds the staff thrusting it awkwardly and violently through the bulb. This causes delayed healing of the urethral wound, and sometimes the formation of a fistula difficult to repair. 2. When the prostatic capsule is entered and an attempt made to enucleate its contents, no line of cleavage can sometimes be found, and persistence may lead to the tearing away of the organ from the pelvic tissues, causing urinary infiltration and infection. 3. If such fibroid growths are removed piecemeal with scissors and rongeur, it leaves a very irregular channel, which subsequently tends to contract, sometimes obstructing urination so that the patient is no better off. 4. There is also danger of tearing into the rectum, which once happened to MacGowan in a cancerous prostate, and which is liable to happen to anyone operating in a very dense or fibroid prostate. 5. When the bladder tissues have been greatly bruised by sharp stones before the operation and where the urine is hopelessly alkaline with all that that implies, all wounded surfaces within the bladder, and sometimes within the prostate, become covered with phosphatic incrustations. These are subsequently cast off or may have to be loosened by curetting somewhere between the third week and the third month. In one case he had to reopen the suprapubic wound on this account. In still another case, such sloughs came away through the perineal wound, which reopened apparently from this cause and subsequently closed itself. 6. Dangerous hemorrhage is not common by the perineal route unless the case is complicated by a tight stricture in the perineal urethra, requiring the severing of the bulb in the course of the operation, or unless the bulb is carelessly cut in making the opening in the urethra, but secondary hemorrhage is liable to occur. He has seen it now in two cases during the past year, following an attack of tenesmus which seemed to arise from an organized clot formed on one side of the bladder neck. When the packing was removed and the perineal wound practically closed, this clot was swept into the urethra and became fixed, causing tenesmus. The forcible contraction of the bladder neck on the clot loosened it from its vessel and a hemorrhage then took place into the bladder, filling it to distention in less than two hours. In one case he was able to stop the hemorrhage by breaking the clots up by a lithrotrite. In the second case he had to do a suprapubic cystotomy under most unfavorable conditions. 7. There is another danger where one or more small nodules are imbedded directly in the tissues around the internal urethral mouth or from nodules buried beneath the mucous membrane just inside the urethral neck. Their removal is necessary, but it may be followed by the tearing out of the whole posterior urethra. This is a disagreeable accident, but it does not necessarily interfere with later function. 8. In making the perineal incision in very large stout men with deep perineums, great care should be exercised to keep well away from the rectum with the skin cut. He has had trouble in having the anterior fold of the anus drawn into the wound, with leakage, though there was no cut in the rectum itself. The benefits of the operation are enumerated. The sexual power usually remains after operation, in spite of the teachings of the Necker school. In the great majority of his 49 prostatectomies and 29 Bottini operations, the results have been ultimately good. None have been positive failures. A few have dribbled for a time, but none permanentlly. He has never yet seen one of these cases where it was not necessary to urinate four or five times in the twenty-four hours, and does not look for it. He says, regarding prostatotomy by the

Bottini method, that it possesses a real surgical value and for certain prostatic obstructions it is to be advised.

Cincinnati Lancet-Clinic.

June 27.

26 *Scientific Work in Ohio State Hospitals. A. P. Ohlmacher.
27 Surgery of the Prostate, Pancreas, Diaphragm and Spleen. (Continued.) B. Merrill Ricketts.

26. **Scientific Work in State Hospitals.**—Ohlmacher notices the work that is being done in the various states at the central laboratories, to which the state hospitals contribute material, and gives the project of a plan he has made for a State Pathologic Institute for Ohio, which should, he thinks, be organized similarly to those of New York and Michigan. It should be open to properly qualified workers from the medical profession of the whole state. The plan includes the formation of a pathologic museum, and strictly scientific memoirs should be issued from time to time after the model of the *Archives of Neurology* of Great Britain. The laboratory should also send out popular bulletins for public distribution giving in plain language the results of scientific work whenever any distinctly valuable contributions in the direction of elucidating the nature of disease or indicating methods of prevention have been made. The government should be under the charge of a board of trustees representing the state medical association, the state hospitals and the state university, with the balance of power in the medical profession. Its immediate management would call for a director or chief with a corps of properly trained assistants of his own selection. He thinks the time is auspicious for such an institution and that the influence of the medical profession can be well exerted to this end.

St. Louis Medical Review.

June 20.

28 Treatment of Puerperal Eclampsia. B. M. Hypes.

Virginia Medical Semi-Monthly, Richmond, Va.

June 12.

29 *Mastoid Pain Not Due to Empyema or Osteitis of the Mastoid Cells, nor to Sclerosis of the Mastoid Process. John Dunn.
30 *Laceration of the Bowel without External Evidence of Injury. Report of a Case, with Remarks on Diagnosis. E. B. Claybrook.
31 Treatment of Anal and Rectal Diseases without General Anesthesia. William L. Dickinson.
32 Cases of (1) Puerperal Insanity; (2) Polyuria Following Brain Injury, and (3) Paralysis and Convulsions Years After Traumatism. W. J. Breeding.
33 Retention of Placenta and Collapse from Excessive Hemorrhage After Delivery. G. Clinton Mouton.
34 Rubber in Windowing Plaster Casts in Compound Fractures. Hugh Crouse.
35 Artificial Feeding of Infants, or Care of Bottle-fed Babies. Hugh T. Nelson.
36 The Treatment of Enlarged Prostates. W. P. Carr.

29. **Mastoid Pain.**—Dunn reports cases where pain referred to the mastoid was due to gumma, relieved by specific medication, and to influenza. He also refers to rheumatism of the atlanto-axidian capsular ligaments as producing symptoms attributable to the mastoid. There is also a mastoid pain which is not due to mastoiditis, though associated with otitis, with which all aurists are familiar.

30. **Intestinal Laceration.**—Claybrook reports cases and reviews others in the literature where laceration of the bowel occurred from contusions without any external injury. He says that if we have a patient with a history of abdominal contusion, suffering pain, with marked tenderness and rigidity, thoracic respiration, absence of peristalsis, as shown by the phonendoscope and transmission of heart and respiratory sounds to the abdomen, with or without rapid pulse, shock or abdominal facies, vomiting or distention, etc., we ought to lose no time in confirming the diagnosis by exploratory laparotomy and deal with the conditions as found. Opening the bowel in these cases does not increase the danger, and we never know what is inside until we get at it.

Pediatrics, New York.

June.

37 *Dislocation of One-half of the Frontal Bone During Parturition. Stewart L. McCurdy.
38 *Adenoids and Their Treatment. J. F. Dickson.
39 The Changes in the Management of Laryngeal Diphtheria Treated by Intubation. Edwin Rosenthal.

37. **Dislocated Frontal Bone.**—McCurdy reports a case of dislocation of the frontal bone, which occurred during parturition, the bone being displaced outward. At the time when first seen, it was too late to replace it, and the brain has evidently adapted itself to the changed conditions. A spring band was applied with pressure pad, but little was accomplished.

38. **Adenoids.**—Dickson describes the condition and advocates operation, or at least medical treatment when symptoms indicative of these growths appear. If they are not large and are soft and friable, treatment directed to the nose and nasopharynx followed by local applications of tannic acid and glycerin or iodin and glycerin and internal medication such as syrup of iodid of iron or hydriodic acid and tonics may be all that is required. If they are large, hyperplastic operative measures are necessary. He prefers cutting operations to the cautery, and thinks it is better to use an anesthetic unless the patient is old enough to control himself. He discourages the use of a steel nail on the finger, considering it dangerous. For anesthesia, he prefers ether, next chloroform. Nitrous oxid, he says, is of too short duration for good work. The patient should be laid on his side, with his head hanging over the edge of the table. Good results of operation are noticeable within a week or ten days. After-treatment in the shape of sprays, etc., should be kept up for a few weeks after operation, as it helps to prevent recurrences.

Medicine, Detroit, Mich.

June.

40 *Treatment of Prolapse of the Rectum. A. E. Halstead.
41 A Case of Cyanosis (Asphyxia) of the Extremities. Augustus A. Eshner.
42 *The Negro as a Distinct Ethnic Factor in Civilization. William L. Howard.
43 *The Dangers of an Exclusive Milk Diet in Nephritis. Alfred C. Croftan.
44 *Cockroaches as Conveyers of Typhoid Infection. Rosa Engelmann.
45 *Blood Cultures in Lobar Pneumonia and Agglutination of the Pneumococcus. Edward C. Rosenow.

40. **Prolapse of the Rectum.**—The different methods of treatment for this condition are described by Halstead, who reports six cases. He concludes that all cases of mucous prolapse of the rectum will be best treated by resection of the protruding mucous membrane and suture of the cut end to the skin of the anus, as in Whitehead's operation for hemorrhoids. In mild cases clamping and cauterizing the linear folds of the prolapse may suffice to effect a cure. In recent reducible prolapse of all coats of the rectum, removal of the cause, if possible, with massage, gymnastics, and proper medication to improve the general health should be first tried. If they fail, amputation or intra-abdominal suspension is advised. In young children operative treatment of prolapse is seldom required. The removal of the cause, which usually can be accomplished, and rest in a horizontal position with tonics and massage will effect a cure in most cases. Among the commoner pathologic conditions having direct causal relation to prolapse in children are intestinal catarrh, rickets, phimosis and calculus. In old irreducible or in recent strangulated cases, the only treatment is amputation by Mikulicz's method. In old irreducible prolapse or in recent cases, where after a fair trial of palliative remedies they have failed, we have the choice of two methods, amputation or intra-abdominal fixation. At present no authoritative statement as to the value of colopexy can be given. It has the advantages of not being dangerous and of being easily performed. When it fails it does not leave the patient worse than before. Inguinal colostomy should never be performed except under special indications, as, for example, when prolapse is associated with obstinate colitis which does not yield to treatment or when stricture or malignant disease exists. Simple catarrhal inflammation or prolapsed rectum does not justify opening the colon. Rectopexy, if employed, should be used only in the lesser degrees of prolapse. In invagination of the rectum and colon it is of no value. In any case its disadvantages and dangers outweigh its advantages.

42. **The Negro.**—Howard remarks that the negro is structurally and psychically an animal, entirely apart from the white race, not capable of improvement. He is returning under present conditions to the atavistic state and is a social danger. The only good point he admits is that he is not vindictive.

43. **Nephritis.**—Croftan argues against an exclusive milk diet in nephritis, claiming that it does not meet the needs of the general nutrition. It contains too little iron, an excess of proteids and floods the system with fluids. Its effects on the renal epithelium are bad. It is apt to retard the healing process in subacute forms and is superfluous in chronic cases. Large quantities of water, of urea and of the phosphates, all of which are carried to the kidneys by this diet in excess, are irritants and harmful. Its effects on the other organs are also injurious mechanically, through the large amount of fluids and the effects on the circulation. The diet for nephritis should contain a minimum of proteids and of water in the acute cases, and the withdrawal of all food or its reduction to a small quantity is preferable to feeding with milk. In chronic cases a similar dietary is also required, though we are not at present able to formulate fixed rules. We do not know enough of the etiology of the condition to decide. He thinks the consensus of clinical experience speaks for more liberal feeding of kidney cases than is usually adopted, and decidedly against one-sided alimentation.

44. **Cockroaches and Typhoid.**—Engelmann gives the conditions in a typhoid epidemic in a certain limited district in Chicago, and describes the conditions, attributing the transmission of the disease to cockroaches.

45. **Pneumonia.**—The conclusions of Rosenow's article are as follows:

1. With improved technic, using for inoculation large quantities of blood, the pneumococcus can be recovered in all cases of pneumonia, and in obscure cases of pneumococcus infection blood cultures may be a diagnostic method of positive value. 2. Pneumococcemia in pneumonia does not mean a specially unfavorable prognosis. 3. On account of the difficulties involved, agglutination of the pneumococcus is, at present, of scientific rather than of practical value. 4. Normal and pneumonic blood and serum appear to have no bactericidal influence on the pneumococcus. 5. The interesting question whether lobar pneumonia is the primary result of a direct local infection of the lung or of a secondary localization in the lung of pneumococci in the blood is as yet hardly ripe for final discussion.

Bulletin of the Johns Hopkins Hospital, Baltimore.

June.

46 The History of St. Bartholomew's Hospital, London. Thomas McCrae.
47 *Cryoscopy as an Index of Renal Insufficiency in Surgical Diseases of the Kidney. Martin B. Tinker.
48 A Simple Electric Female Cystoscope. Thomas S. Cullen.

47. **Cryoscopy in Renal Insufficiency.**—Tinker has studied the effects of renal insufficiency on the freezing point of the blood and urine; that of the blood is normally about —0.56 C. below that of distilled water, with physiologic variation of about .02 degrees. The increase of the freezing point to over —0.58 C. indicates renal insufficiency. The urine, on the other hand, has a much wider range. Under normal conditions the freezing point of the urine varies between —0.9 and —2 C. A freezing point of above —0.9 is understood as an indication of renal insufficiency. A large number of cryoscopic examinations have been made, sufficient, it is thought, to prove the value of the test. Its advantage, Tinker says, over the usual quantitative chemical tests is that it gives an index of the total waste products excreted by the urine instead of that of a single constituent. He thinks that it might even alone be sufficient to determine the condition of the kidney, provided we can get the separate secretions of the two kidneys. The value of cryoscopic examination of mixed specimens alone is much inferior, however, to that of cryoscopic examination of the blood. In all doubtful cases both tests may be used in combination with the usual chemical tests with added certainty as to the state of the kidneys. The chief value of the test is in determining the prognosis in doubtful cases. If examination indicates a high degree of renal insufficiency, operation may be contraindicated. In other cases it may be of use in determining whether nephrectomy or a less extensive operation, such as nephrotomy or nephrolithotomy, should be given preference. The usefulness is a limited one in surgical cases, but when it is indicated it is very much needed, and the information it gives is correspondingly valuable. The method is simple and can be readily made by those little experienced in its use. It requires no special training and it does not take more time than many other methods.

American Gynecology, New York.

May.

49 Presidential Address—The Surgical Treatment of Early Diagnosed Cancer of the Uterus, More Especially by Hysterectomy. J. E. Janvrin.
50 *Ectopic Gestation. Etiology; Symptoms; Diagnosis; Treatment. J. H. Stealy.
51 Vesicofixation of the Uterus. N. J. Hawley.
52 *The Conservative Surgery of Lesions of the Appendages. Hector Treub.

50. **Ectopic Gestation.**—This condition, according to Stealy, is by no means infrequent; it is among the most serious conditions that we meet. It generally occurs in those near the middle of life with a previous history of sterility. The symptoms specially to be borne in mind are: 1. That the woman will have missed a period; 2, colicky pains; 3, bloody discharge from the vagina and irregular continuation of menstruation, often leading the woman to believe herself not pregnant. With few exceptions, and these dependent only on the woman's condition, the indications for operation are absolute. He says no case of "colic" in a woman capable of childbearing, especially one married, should be allowed to pass by without a suspicion of ectopic gestation. Any such symptoms in a pregnant woman should not be lightly regarded.

52. **Conservative Surgery of the Appendages.**—Treub finds in striking the balance for conservative operation that such procedures for salpingo-ovaritis offer a danger of death that ought to be estimated at 2 per cent. at the most; some chances of not giving complete relief, of being insufficient and necessitating a second operation either conservative or radical, and the certainty of not procuring for the patient a new malady, under the form of the anticipated menopause. Comparing this balance with that of radical operations, he concludes that medical treatment suffices in at least one-half of the cases of salpingo-ovaritis, but if it is insufficient or contraindicated, one should never at the outset perform a radical operation of any sort. The first operative stage should always be posterior colpotomy. When by means of posterior colpotomy it is discovered to be a matter of tuberculous affection, hysterectomy should be performed as soon as possible. In case of hydrosalpinx not yielding to repeated colpotomy and requiring other intervention, and where one wishes to try and remedy steriility in women, the conservative abdominal operations (resection, salpingotomy salpingo-ovaro-syndesis) are indicated. Salpingorrhaphy should be reserved as an accessory operation to a laparotomy performed for no matter what other indication.

Journal of Cutaneous Diseases, New York.

June.

53 Methods of Teaching Dermatology. John T. Bowen.
54 *Cases of Bullous Dermatitis Following Vaccination. James S. Howe.
55 Syphilis and the Medical Secret. Prince A. Morrow.

54. **Bullous Dermatitis.**—Howe reports ten cases of bullous dermatitis apparently following vaccination. He is inclined to think that infectious material introduced at the time of vaccination was perhaps the cause, though there is no scientific proof of such an assertion. The article is presented as a preliminary report. A fuller discussion of the cases is promised in the future.

The Alienist and Neurologist, St. Louis.

May.

56 *History of the Evolution of the Brain. Charles H. Hughes.
57 *Mixoscopic Adolescent Survivals in Art, Literature and Pseudo-ethics. (To be continued.) James G. Kiernan.
58 Outlines of Psychiatry in Clinical Lectures. C. Wernicke.
59 Clinical and Pathologic Changes in Dementia Paralytica During Recent Decades. G. Nücke.
60 *The Penitentes. A Psychological Study. Marc Ray Hughes.

56. **The Evolution of the Brain.**—This article is a chapter of a work by Hughes which is now nearly ready for publication.

57. **Mixoscopic Survivals.**—Kiernan's article is incomplete in this issue. It is largely devoted to the sexual element as appearing in the various forms of folklore and in adolescent conditions.

60. **The Penitentes.**—Hughes studies the so-called penitentes of Old and New Mexico, whose religious exercises, in part, consist of self-flagellation. He considers it due to a mental defect and thinks that these individuals are degenerates, due to faulty development under a low grade of civilization and imperfect system of education.

Medical Sentinel, Portland, Ore.

June.

61 *The Plague Situation in San Francisco and the Problem of Chinatown. Woods Hutchinson.
62 *The Meaning of Uric Acid and the Urates. (Concluded.) Woods Hutchinson.
63 Hernia. E. N. Crockett.
64 The Sympathetic Nervous System in Health and Disease. D. M. Brower.

61. **The San Francisco Plague Situation.**—Hutchinson gives the history of plague in San Francisco with caustic criticisms of the late state authorities.

62. **Uric Acid.**—This second paper, also by Hutchinson, concludes the series. He ends it with the following propositions which seem to outline the most rational tenable view of gout and lithemia: There is no connection whatever between the production of urea and uric acid, hence interdiction and marked limitation of animal or of nitrogenous foods, as such, in gout is irrational. Uric acid in health comes from two sources, the larger part from the nuclein and purin bases of foods, the smaller part from destructive metabolism of the nucleins of the body tissues. It is the latter alone which is increased in gout and lithemia. These are only symptom names for a miscellaneous group of chronic toxemic processes of widely varied origin characterized by the production of uric acid and the urates. By gouty diathesis we mean the possession of a sufficient degree of resisting power on the part of the protective cells of the body to oppose the entrance of any poison, whatever its character or source, with consequent destructive metabolism and the production of uric acid, but not adequate to neutralize or successfully prevent its absorption. The uric acid of gout, like the phosphoric acid which accompanies it, is merely the result and measure of the destructive metabolism of the nucleins of the body cells, chiefly, it is probable, of the leucocytes in response to the invasion of poisons or toxins, organic or inorganic. Hence the use of lithia or other solvents is irrational and any apparent benefits are to be explained on other grounds. As most of the toxins setting up this destructive metabolism and consequent uric acid production are of intestinal origin or entry, the diet should be regulated wholly with regard to the diminution of intestinal fermentation and putrefaction. As animal foods are more appetizing and attractive, and are more apt to be indulged in to excess, their limitation may be found more frequently indicated than that of the vegetable foods, but sugars and starches are very often at fault. As uric acid and the alloxur group are not toxic, or only feebly so, and are not the cause of gout, the prohibition of foods even rich in nucleins and the purin bases, has no clinical basis, and is of doubtful utility, except as diminishing the attractiveness of the dietary. The rôle of the liver in gout is negative, from its incapacity to act as a poison filter, and to absorb or transform into harmless excretory substances the excess of toxins brought to it by the portal vein. The drugs found of value in gout owe their efficacy chiefly to their power of checking intestinal putrefaction or of preventing the absorption of its products or promoting their elimination.

Interstate Medical Journal, St. Louis.

June.

65 *Simplicity in Dealing with Abscess of the Appendix. Paul Y. Tupper.
66 *Etiology and Pathology of Puerperal Eclampsia. Max W. Myer.
67 Symptoms and Differential Diagnosis of Puerperal Eclampsia. C. A. Ritter.
68 Treatment of Puerperal Eclampsia. B. M. Hypes.

65. **Appendicitis.**—Tupper pleads for simpler methods of operation in appendicitis. He thinks it is best to leave the appendix alone in appendiceal abscess. We may weaken the abscess walls and cause rupture, and we can do no harm by its retention. He objects also to mopping or washing out the cavity. His own practice is simply to enter the abscess in the most direct way, making a free opening and then insert a gauze drain.

66. **Puerperal Eclampsia.**—Myer is inclined to favor Fehling's theory of the fetal etiology of puerperal eclampsia as well as an autointoxication from the maternal organism.

The Physician and Surgeon, Detroit and Ann Arbor, Mich.

March.

69 *The Ureteral Dilatations, Spindles, Reservoirs and Ampullæ Byron Robinson.
70 *A Few Facts Regarding Paretic Dementia. Irwin H. Neff.
71 *Medical Malpractice. William P. Lane.
72 *The Surgical Treatment of Smallpox. Laurel B. Sandall.

69. **Ureteral Dilatations.**—Robinson's article is a full detailed account of various swellings and contractions of the ureters and their relation to age and other conditions.

70. **Paretic Dementia.**—Neff holds that heredity has a large influence in the causation of paretic dementia, while the percentage of syphilitics is also too considerable to be disregarded. Other influences, however, may act in producing the same symptoms.

71. **Medical Malpractice.**—The relation of the physician to the law is discussed by Lane, who finds from the decisions of the courts that the physician or surgeon will not be held liable if he uses reasonable and ordinary skill and learning and exercises reasonable diligence and care. Mere errors of judgment are not grounds for conviction for malpractice. Gross carelessness or failure to exercise proper diligence and caution, regardless of his learning and skill, make him liable, and he will be more liable if he employs methods prohibited by law, and when he omits altogether the established mode of treatment and follows one that has proven injurious. He does not impliedly contract to cure, but if a contract be entered into the law of contracts will apply. When the defense to an action for malpractice is that plaintiff's own negligence contributed to the result, the burden of proving it is on the defendant.

72. **Smallpox.**—Sandall, from his experience in the Philippines, believes in the practice of opening the pustules freely. He would use antiseptic baths from the very beginning and keep the skin as nearly aseptic as possible. As soon as the spots become vesicular, open the top and remove all contents, applying antiseptic solution to the whole open surface. The pustules, after they have formed, should be treated in the same way and the skin kept free from pus. The vesicles once thoroughly opened and destroyed do not proceed to pus formation and absorption of the poison is avoided.

Buffalo Medical Journal.

June.

73 *Provisional Hemostasis in Operations on the Head and Neck. George R. Fowler.
74 Stimulation. Eli H. Long.
75 Blood Examination in General Practice. Irving P. Lyon.
76 Gout and Its Treatment. M. A. Auerbach.
77 Report of Two Interesting Medicolegal Cases. William C. Krauss.
78 Subcutaneous Injection of Paraffin in the Correction of Nasal Deformity. Edgar A. Forsyth.

73. **Provisional Hemostasis.**—Fowler gives the history of provisional hemostasis in surgery, and reports cases in which he has used Crile's method of compression of the common carotids with advantage. He considers the possibility of accidents in these cases avoidable by proper care as a rule, and that there need be little said as regards the possibility of permanent injury to the vessel. In his experience there were no bad effects excepting in one case in which aphasia was produced, but this was undoubtedly due to some lesion in the handling of the brain. The case was one of intracranial neurectomy after Abbe's method. The brain was elevated during the operation and a sensory aphasia developed afterward. The only explanation to be given was that it was due to some lesion of Broca's convolution owing to the general atheromatous condition of the arteries of the brain.

American Journal of Obstetrics, New York.

June.

79 *Pregnancy Complicated by Fibroid Tumor. Henry C. Coe.
80 Pregnancy and Labor Complicated by Myomata. George Tucker Harrison.
81 *Combined Bisection of Tumor and Uterus, with Partial Enucleation of Bisected Tumor in Abdominal Hysterectomy for Large Fibroid Tumors in Body of Uterus. George H. Noble.
82 *The Relation and Corelation of Gynecologic and Nervous Affections. Chauncey D. Palmer.
83 *Repetition of Cesarean Section on the Same Patient: The Experience of the Boston Lying-in Hospital. Charles M. Green.
84 *Carcinoma of the Cervix Uteri. Thaddeus A. Reamy.

85 *Primary Carcinoma of the Vulva. Reuben Peterson.
86 Should the Uterus be Removed when Operating for Double Pyosalpinx, Either from Above or Below? Philander A. Harris.
87 Should the Uterus be Removed when the Ovaries and Tubes are Removed in Cases of Double Pyosalpinx, when Operating Either Through the Abdomen or the Vagina? I. S. Stone.
88 *Note on the Occurrence of Gallstones in Insane Women. W. P. Manton.

79.—See abstract in THE JOURNAL, XL, p. 1447.

81.—Ibid., p. 1529.

82.—Ibid.

83.—Ibid., p. 1595.

84.—Ibid., p. 1596.

85.—Ibid.

88.—Ibid., p. 1597.

American Practitioner and News, Louisville, Ky.

April 1 and 15.

89 Amebic Dysentery. G. B. Young.
90 The Treatment of Pneumonia. J. E. Smith.

Proceedings of the Philadelphia County Medical Society, Philadelphia.

May 30.

91 Modification of Milk for Infant Feeding. Edwin E. Graham.
92 Management of Malignant Disease of the Uterus. George E. Shoemaker.
93 Orbital Cellulitis as a Sequel of Scarlatina: The Report of Two Cases. Burton Chance.

Washington Medical Annals, Washington, D. C.

May.

94 *The Abuses and Uses of Venesection in the Practice of Medicine. Robert Reyburn.
95 Case of Dentigerous Cyst. R. M. Slaughter.
96 Case of Tumor of Cerebellum. Samuel S. Adams.
97 Atrophic Rhinitis. Charles W. Richardson.
98 Multiple Fistulæ of the Perineum, with Report of a Case. Wallace Neff.
99 A Consideration of the Liver as a Factor in the Cause, Prevention and Treatment of Disease. Robert S. Lamb.
100 Downes' Electric Angiotribe in Cases of Removal of Uterus, Appendages, Appendix, etc. J. W. Bovée.
101 Case of Syphilitic Ulceration and Stricture of Rectum; Gonorrheal Tubo-ovarian Cysts. D. S. Lamb.
102 Case of Tubo-ovarian Abscess and Salpingitis. Operation. J. Wesley Bovée.
103 The Treatment of Certain Inflammations of the Prostate, Bladder and Kidney. Edward L. Keyes.
104 Complete Nephro-ureterectomy. J. Wesley Bovée.
105 Case of Appendicitis. S. S. Adams.
106 Case of Uterine Fibroids Removed by Operation. J. Taber Johnson.
107 Case of Decidual Haematomata. A. Behrend.

94.—This article was published in THE JOURNAL, XL, p. 1564.

Oklahoma Medical News-Journal, Oklahoma City.

June.

108 The Present Status of the Therapeutic Uses of the X-Rays. J. Edward Stubbert.
109 Temporary Expedients in the Primary Treatment of Fractures. Thomas H. Manley.
110 Tetany and Eclampsia in Childlife. (Concluded.) Rudolph Hecker.
111 Suprapubic Lithotomy. A. K. West.

Alabama Medical Journal, Birmingham.

June.

112 Jerome Cochran Lecture. G. H. Price.
113 Some Observations on a Crusade Made Against the Mosquito in Talladega, Ala., During Summer of 1902. B. B. Sims.
114 Ophthalmia Neonatorum, Its Prophylaxis and Treatment. Paul S. Mertins.
115 Education. R. M. Cunningham.
116 Artificial Infant Feeding. J. F. Jenkins.
117 Biogenesis and Heredity. Raymond Wallace.
118 Gonorrhea. Its Dangers and Its Rational Treatment. W. C. Williams.

Medical Review of Reviews, New York.

May 25.

119 The Antiseptico-Anesthetic Method of Treating Pulmonary Tuberculosis. Ambrose T. Holly.

Richmond Journal of Practice.

May.

120 Mastoid Pain Not Due to Empyema or Osteitis of the Mastoid Cells, Nor to Sclerosis of the Mastoid Process. John Dunn.

Medical Times, New York.

June.

121 What Kills the Surgical Patient—Anesthesia, Shock, Hemorrhage, Nephritis, Peritonitis, Embolus, Pneumonia? Byron Robinson.
122 Interesting Complications in Typhoid Fever. T. F. Hale.
123 Treatment of Multiple Neuritis and Neuralgias. William Wormley.
124 The Physiology of Pain. Hermann Gasser.
125 The Relation the Uterus Bears to the Mind. J. C. Carlton.

New England Medical Monthly, Danbury, Conn.

June.

126 Removal of Tonsils. C. E. Boynton.
127 Colorado Springs, the "City of Sunshine," as a Health Resort for Pulmonary Diseases. Harlan Trask.
128 The Relation of the Physician to Politics. Donly C. Hawley.
129 A Common Cause of Tuberculosis. T. J. Townsend.
130 The Treatment of Septic Processes by Intravenous Collargolum Injections. Dr. Jaenicke.
131 Sublamine in the Treatment of Syphilis. N. Friedländer.
132 Remarks on the Prevention of Appendicitis. Sinclair Tousey.

Medical Standard, Chicago.

June.

133 Diagnosis and Treatment of Chronic Catarrh of the Stomach. Charles D. Aaron.
134 A Surgical Clinic. (Ectropion, etc.) N. Senn.
135 The Medical Society of the State of New York and the American Medical Association. A. L. Benedict.
136 The Operation for Pyosalpinx, with Report of Twenty-two Cases and Five Secondary Hysterectomies, with One Death. (Concluded.) Raymond C. Turck.
137 Pain and Its Indications. E. C. Hill.

International Journal of Surgery, New York.

June.

138 Gangrene or Mortification Dependent on Lack of Skill or Neglect in the Treatment of Fracture. Thomas H. Manley.
139 Shock in Emergency Surgery. F. H. McNaught.
140 Posterior Pudendal Hernia, with a Report of Two Cases Complicating Pregnancy. C. W. Milliken.
141 The Technics of Amputations. R. H. Cowan.
142 A Method of Dealing with Fractures. J. B. Taulbee.
143 The Surgical Assistant. (Operations on Stomach and Intestines.) (Continued.) Walter M. Brickner.
144 Necrosis of Six Inches of Ileum, Simulating Appendicitis. William H. Woglom.

Kansas City Medical Index-Lancet.

June.

145 Clinical Report. Two Cases of Ectopic Gestation. Jacob Block.
146 Tonsillitis. Tinsley Brown.
147 Tubo-ovariotomy. C. E. Fulton.
148 Report of Cases. (Epithelioma, etc.) Harry W. Wright.
149 A Layman on Antitoxins. E. W. Caldwell.
150 An Unusual Case of Poisoning. Frank C. Neff.

Medical Summary, Philadelphia.

June.

151 Appendicitis. G. O. Smith.
152 Dilation of the Rectum. J. A. Burnett.
153 Headache. S. A. Buchanan.
154 Specific Macrotys and Its Use. Andrew J. Mann.
155 Medical Competition. C. E. Boynton.
156 Rational Aphrodisiac Treatment by the Use of the Alkaloids. W. C. Buckley.
157 Some Points on Spiritualism, Consumption and Epilepsy. Horatio S. Brewer.
158 Unwritten Medicine—Coal Oil. Benjamin H. Brodnax.
159 Newness Is Always of Interest and Many Times Beneficial in all the Vocations and Professions of Life. William H. Vail.
160 A Case (Rupture of the Womb). D. M. B. Thom.
161 Constipation. George J. Monroe.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest

British Medical Journal, London.

June 20.

1 *Muscular Movements and Their Representation in the Central Nervous System. Charles E. Beevor.
2 The Rapid Estimation of the Quantity of Chloroform Vapor Present in Mixtures of Chloroform Vapor and Air. Augustus D. Walker and Victor Geets.
3 The Influence of Ether Administration on Nitrogenous Metabolism. Horace J. Pechell.
4 The Process of Chemical Synthesis in Living Things. Arthur C. Hill.
5 Case of Tuberculous Meningitis in an Adult, with Unusual Symptoms. T. H. Morse and A. J. Cleveland.
6 Some Observations on the Morphology of the Trypanosoma Found in Sleeping Sickness. Aldo Castellani.
7 *The Physiologic Action of Ethyl Bromid and of Somnoform. Sydney W. Cole.

1. **Muscular Mechanism.**—This second Croonian lecture by Beevor is a continuation of the one in the last issue devoted to the mechanism and the action of the muscles of the upper extremities and the trunk. Like the former it is incapable of being abstracted.

7. **Somnoform.**—This mixture, which has been used as an anesthetic, largely in France in minor operations, is made up of ethyl chlorid 65 per cent., methyl chlorid 30 per cent., and ethyl bromid 5 per cent. It has been investigated by Cole, who

offers his conclusions as a preliminary communication, as follows:

The chief indications that my experiments afford as to the use of somnoform as an anesthetic are: 1. The chief danger being a paralysis of respiration, a careful watch must be kept over the respiratory movements. 2. Owing to the depression or paralysis of the peripheral endings of the cardio-inhibitory fibers and the comparative slight action on the heart itself there is no danger of heart failure, provided respiration has not ceased. 3. After cessation of the respiratory movements it is easy to restore the animal by artificial respiration. I am of the opinion that the paralysis of the cardio-inhibitory fibers by ethyl bromid renders that drug a very valuable anesthetic. Embley has recently shown that the sudden death that not infrequently occurs in chloroform anesthesia is due to inhibition of the heart through stimulation of the cardio-inhibitory center. This is usually only seen in the early stages of chloroform administration, the danger passing off when the medullary centers are exhausted. I venture to suggest that a valuable anesthetic for prolonged operations could possibly be obtained by combining ethyl bromid with chloroform. During anesthesia produced by ethyl bromid the vagi are paralyzed; chloroform would then be deprived of one of its great dangers. It might be possible to get well past the stage of excitation into that of depression of the medulla before ceasing to give ethyl bromid, and maintaining anesthesia by chloroform alone, ethyl bromid being discontinued owing to its paralytic effect on respiration. I hope shortly to give an account of experiments I am performing to test this possibility.

The Lancet, London.

June 20.

8 Muscular Movements and Their Representation in the Central Nervous System. Charles E. Beevor.
9 *Intubation in Cases of Diphtheritic Laryngitis. H. A. T. Fairbank.
10 Two Fatal Cases of Partial Thyroidectomy. Frank C. Madden.
11 *On the Danger of Railway Trips to High Altitudes, Especially for Elderly People. Theodore Zangger.
12 *On the Discovery of a Species of Trypanosoma in the Cerebrospinal Fluid of Cases of Sleeping Sickness. Aldo Castellani.
13 Case of Chorea Gravidarum Treated by Inducing Abortion. John Benjamin Hellier.
14 *A Simple Expedient in the Estimation of Sugar by the Copper-reduction Method. S. Archibald Vasey.
15 Preliminary Note on the Use of Chloroform in the Preparation of Vaccine. Alan B. Green.

9. **Intubation.**—Fairbank's article is based on an experience of 33 cases. He remarks on the scarcity of literature on the subject in Great Britain since the introduction of antitoxin. Taking his own cases with those of Kellock and Basan, he has 78 cases of intubation associated with antitoxin treatment, with 76.9 per cent. of recoveries. Roux mentions 128 cases, with a percentage of recoveries of 62.8. According to his own experience the greater the skill of the operator the better the results. The operation is an easy one, provided the operator has had practice, and in experienced hands is practically free from danger, though death may occur from syncope, as in a case reported. He thinks the sizes recommended by O'Dwyer for the different ages are rather small, and that the size of the child should be considered rather than its actual age. The male larynx is a little larger than that of the female of the same age. Fairbank believes in retention of the string as long as the tube remains, and in all his cases the thread was left attached to the tube. He fixes it to the cheek with a piece of strapping, and thinks the children soon get used to it. In only one of his cases was there any trouble from the child biting through the string. Abrasions and ulcerations of the epiglottis can be avoided by careful attachment of the string on the cheek, and any little disadvantage on this score is compensated for by its advantages otherwise. After the tube is in place the child should be laid on his side to facilitate the escape of mucus from the side of the mouth. The coughing soon gives way to peace and quiet, and the child is at last able to sleep. Feeding by the mouth is possible in a large number of cases and is worth trying. It is an important point to decide when to take out the tube. In the early stages it should be removed every twenty-four hours for cleaning and to allow expulsion of mucus. He suggests the following rule in the average case. The tube should be removed and replaced at the end of twenty-four hours; removed at the end of another twelve hours and the result awaited. If the tube has to be replaced it should again be removed after twenty-four hours. After it is again replaced it can be left in for forty-eight hours, and will then usually enable the child to dispense with it. Attempts at discontinuing the use of the tube before thirty-six hours are almost invariably unsuccessful. The longest recorded case is one reported by Brothers, in which the tube was held for fifty-eight days with interruptions to the end of the twenty-first day. In one of Fairbank's cases the tube was only required thirty-two hours; the longest case required it until the thirty-fifth day. Its extraction by means of the string is, of course, easy, but an extractor is a dangerous weapon and requires the greatest skill and gentleness in its use. Vomiting after or during intubation is rare and occurred in but one of his cases. Coughing up of the tube is also rare if a suitable size is chosen. If immediate relief is not afforded by intubation, or if the child's distress increases, the tube should be removed, and may bring out with it the membrane or have it coughed out soon after. Tracheotomy should not be performed until the result of removal of the tube has been seen. The membrane may block the tube at any time during the first few days. It is advisable to explain to the nurse the conditions that indicate the need of immediate extraction. Profuse watery expectoration is sometimes observed with great restlessness. By laying the child well over on its side and frequently clearing the throat with a swab, relief will often be afforded. Severe ulceration of the laryngeal membrane is uncommon. In his series 3 secondary tracheotomies were performed, but he is now convinced that they were unnecessary. He analyzes the 5 fatal cases, 1 of which died during the operation of intubation. In another case the child died a day after intubation. There were signs of tuberculosis and general tuberculosis was found. In the third case pneumonia developed and caused death after removal of the tube. In the last case the patient died three days after admission from anuria and bronchopneumonia. He thinks in most of these cases at least the fatal result could not have been avoided if primary tracheotomy had been performed. He notices one or two instances of ugly ulceration from the use of the tube in non-diphtheritic cases. Abrasions or ulcerations may occur very rapidly in debilitated subjects.

11. **High Altitudes.**—Zangger's warning in regard to the dangers for elderly people of rapid railway journeys up to a considerable elevation has already been noticed in these columns, page 1547 of the last volume. A difference of altitude of a little over 8,000 feet, during the mild weather and free from wind, may cause a decrease of blood pressure and of the vital capacity with obvious cyanosis and an increase of the pulse rate. He says people with heart disease hardly need to be warned against making mountain ascensions. In case of elderly people with vascular apparatus impaired to a degree, yet apparently in good health, he would warn them to try an ascension of 3,000 or 4,000 feet before attempting greater elevations. In any case they must acclimatize themselves or become accustomed to the reduction of pressure by stoppage at intermediate stations. He advises them not to try to go above 9,000 feet unless under careful medical supervision. The decrease of atmospheric pressure is of importance and the chemical features of respiration also undergo a change. The amount of oxygen which is absorbed sinks while the respiratory quotient rises. This means that the bodily tissues, inclusive of the heart, receive less than the usual amount of oxygen, and it is also to be mentioned that the muscular substance of the heart is especially liable to suffer from the deficient blood supply. A very important factor which is usually overlooked is the reduction of temperature of the atmosphere, which may be as much from 30 to 60 degrees F., causing the peripheral blood vessels to contract and remain contracted. This must affect the blood vessels and the distribution of blood in the whole system, and on return to low ground considerable oscillations of the blood pressure and a rise of some duration may take place which may explain the occurrence of apoplexy. It must be remembered that the vessels of the brain have not yet been proved to possess vasomotor nerves so that the regulation of the cerebral pressure may be very inconsiderable. He remarks also on the acute dilatation of the heart liable to be produced, and this may occur in spite of its apparent improbability in persons who have been carefully conveyed up to high altitudes without any muscular effort whatever, and may not be perceptible until twenty-four or thirty-six hours after the excursion has been made. It is advisable to immediately send the patient to a lower ground, and better by carriage than rail-

way. Absolute rest in bed for several days is sometimes necessary. When insomnia occurs, wet packs to the lower extremities or abdomen, bromids and even morphin may be given. The heart can be stimulated with caffein or camphor, but not with digitalis. The bowels should be in good functional order and free diaphoresis encouraged. Externally counter-irritants may be applied to the region of the heart and in severe cases venesection may be performed. The heart must be kept comparatively quiet for several weeks or even for months, after the severer symptoms with dilatation, etc., such as dyspnea, congestion, precordial pain or possibly angina pectoris. He reports a case in detail where a patient 68 years of age, apparently in good health, had marked dilatation from a railroad trip carrying him to an elevation of 8,505 feet. He was quite well during the trip and for the next thirty-six hours, but at its termination he was still at an elevation of 5,315 feet. The symptoms showed themselves while taking a walk.

12. **Sleeping Sickness.**—Twenty out of 34 cases revealed the presence of the trypanosome in the cerebrospinal fluid in sleeping sickness. Castellani gives its apparent relations to the disease, which are practically the same as those already noticed in THE JOURNAL of July 4, p. 64. In a note by Sir Michael Foster it is stated that Col. Bruce, R.A.M.C., who has been continuing the investigation begun by Dr. Castellani, finds the tryaposoma in every case in the fluid obtained by lumbar puncture (38 cases), and has found it in the blood of 12 out of 13 cases.

14. **The Sugar Test.**—The drawback to the original method of Fehling is the formation and suspension of red cuprous oxid in a blue solution. It occurred to Vasey that instead of adding a reagent to form a soluble compound to the cuprous oxid as it is produced in Pavy's and Gerrard's processes, an inert powder, preferably of a clear white color, may be employed, so as to entangle the precipitated oxid and carry it rapidly to the bottom of the solution, leaving above a clear liquid in which the faintest trace of blue can be seen. He found that precipitated chalk or barium sulphate fulfilled the requirements admirably. To the measured quantity of Fehling's solution (generally 10 c.c.), suitably diluted, he adds about two teaspoonfuls of a finely precipitated calcium carbonate or barium sulphate. The mixture is then raised to the boiling point, being gently stirred with a glass rod during the whole time. The solution in which the sugar has been dissolved is then run in after the usual manner. It will be found that the red cuprous oxid will be deposited on and evenly distributed through the chalk slime or barium sulphate, which rapidly subsides so that the true color of the clarified supernatant liquid is quite easily seen. In this way the exact point of transition from a trace of blue color to a colorless solution can be sharply noted. The process is rapid and extremely accurate according to a number of estimations made by him with standard solutions of sugar, diabetic urines, etc., and he thinks it will be found convenient in clinical practice.

Journal of Tropical Medicine, London.

June 15.

16 On Pre-pupal Changes in the Larvæ of the Culicidæ. G. M. Giles.
17 Typhoid Fever Among the Natives of Southern China. J. Preston Maxwell.
18 Tropical Hygiene. (Continued.) W. J. Simpson.

Hospitalstidende, Copenhagen.

Last indexed XL, page 682.

19 (XLVI, 4.) *Bactericidal Properties of Milk. Betzy Meyer.—Bidrag til Kendskab om Melkens bact. Evne.
20 Sanatoria and Hospitals. M. Hindhede.—Om Sanatorier og Sygehuse.
21 (Nos. 5-6.) *To Preserve Color of Anatomic Specimens. M. Claudius.—Metode til Opbevaring af anatomiske Praeparater.
22 *Joint Participation in Osteosarcomata of Long Bones. V. Schalemose.—Om Ledtilfaelde ved Osteosarkomer i de lange Rorknogler.
23 (Nos. 7-8.) *Tilfaelde af infrapapillaer Duodenal-Stenose og Tetani behandlet med Gastroenterostomi. A. Madsen.
24 *One Danger in Use of Bag Dilator. Niels Muus.—En Fare ved Indlaeggelsen af Champetier de Ribes Ballon.
25 Reform Needed in Building Laws. S. Hansen.—Bygningslovgivningens sanitaere Hovenopgave.
26 (Nos. 9-10.) *Transmission of Human Tuberculosis to Cattle. J. Fibiger.—Om Overforelse af Menneskетuberkulose til Kvaeget.
27 *Om Hyperacliditens-Etiologi. A. Borgbjerg.
28 (No. 12.) Hemoglobinometer. F. Tobiesen.
29 (Nos. 13-14.) Hysteria, Suicide and Simulation. Firedenreich.—Hysteri, Mordforsog og Forsog paa Selvmord. Simulation.
30 *Clinical Picture of Febrile Epidemic Cerebrospinal Meningitis. Sorensen. (Commenced in No. 10.)
31 (No. 15.) 2 Tilfaelde af Ulcus ventriculi perforans. T. Rovsing.
32 (No. 16.) *Bromid and Salt Starvation Treatment of Epilepsy. C. Madsen.—Om Epilepsibehandlung med Bromnatrium I Forbindelse med Klornatriumfattig Kost.
33 (Nos. 17-18.) Automatisme ambulatoire. F. Hallarger. One case. Railroad conductor.
34 *Case of Lupus Cured with Ethyl-Chlorid Refrigeration. P. Nordentoft.—Tilfaelde af Lupus vulgaris faciei behandlet med Frysning.
35 Are Chilblains a Tuberculide? G. E. Permin.—Er Erythema pernio (Frosten) et tuberkulost Exantem?

19. **Bactericidal Power of Fresh Milk.**—Nineteen series of experiments are described which illustrate that "living" milk, that is, freshly milked or at least within five or six hours, has bactericidal power for the bacteria usually encountered in milk and also for the diphtheria bacillus. The growth of the bacteria is not affected by immediate transferrence of the milk to a low temperature. The number of germs constantly diminished in the milk as it stood for the first few hours, after which they constantly increased.

21. **To Retain Color of Anatomic Specimens.**—Claudius points out that in the ordinary methods of preserving specimens the hemoglobin is soon dissolved or discolored, and with it is lost the natural appearance of the tissues. He has succeeded in preserving the color of the hemoglobin by transforming it into a carbonic oxid combination which is much more resistant and stable. This is done by saturating the specimen with illuminating gas, which always contains a certain percentage of carbonic oxid. The specimen is placed in a saturated solution of ammonium sulphate, filling about one-third of the tight vessel, and then the gas is introduced. Specimens thus prepared are as bright to-day as when dissected out fourteen weeks ago.

22. **Joint Involvement in Sarcoma of the Long Bones.**—This communication from the hospital in charge of Oscar Bloch mentions that in 30 cases of osteosarcoma of the long bones, in 15 the affection at first presented the clinical picture of an inflammatory arthritis, and in 6 of the latter the knee was involved and supposed to be the sole lesion at first. In differentiating, the patient's constitution, age, sex, family antecedents or preceding trauma afford no characteristic data, but tuberculosis, malignant tumors, syphilis and tabes must be excluded. Fever may or may not be present in case of osteosarcoma. The pain is occasionally characteristic, but its radiation to a sound knee may be deceptive. The pain in case of a sarcoma usually starts always at the same point and spreads thence like a neuralgic pain along certain nerve tracts, and occurs spontaneously, both at rest and during exercise, sometimes most severe at night. When such pains are accompanied by an apparent joint affection, resembling a white swelling or hydrarthrosis, the possibility that the affection may be of a sarcomatous nature should suggest itself. Usually, however, the pains are those of any inflammatory joint affection. The irregular shape of the tumor and its irregular consistency are important signs of sarcomatous involvement, also the infiltration of the lig. cruciata, causing the filling out of the popliteal space. This does not occur to the same extent in case of synovitis or tuberculosis. The movability of the joint is frequently retained and is important for the differentiation. The sarcomatous lesion is not benefited by immobilization, elevation and repose like an ordinary arthritis, and suffers when a compressing bandage is applied, edema usually forming around the edges of the bandage. These differentiating signs may be all absent, but they are encountered in a certain proportion of cases.

23. **Duodenal Stenosis Below the Papilla.**—When the stenosis is above the papilla the clinical picture resembles that of pyloric stenosis, but when it is farther along in the intestine the characteristic symptoms are admixture of bile with the stomach contents, alternating positive and negative findings of free hydrochloric acid, and more or less pronounced acholia of the feces. These symptoms were all combined in the case described by Madsen. The patient was a field hand, 41 years

old, the disturbances dating from a little more than a year before. They commenced with severe pains in the cardia evening and night, obstinate obstipation and progressive weakness and emaciation. One day, after severe vomiting, an attack of tetany developed. He was treated by gastroenterostomy, and after a period of improvement died in cachexia.

24. **Danger from Introduction of Bag Dilator.**—Muus warns that it is wise to determine whether the head is movable before attempting to introduce the dilatable bag. In a recent experience the head was immovable and the forceps slipped, perforating the uterus wall.

26. **Transmission of Human Tuberculosis to Cattle.**—Fibiger reviews the various reports that have appeared in the last year or two on the communicability of human tuberculosis to cattle. He finds that various authors have reported 61 attempts at inoculation of cattle with human tuberculosis, with positive results in 41, that is, tuberculosis was induced in 51 out of 81 animals in these 41 experiments. In 74 experiments on 108 cattle, swine and goats the results were positive in 52, that is, on 73 of the animals. Consequently, two-thirds of all the experiments were successful and two-thirds of all the animals were infected. Koch's assertions on this subject are therefore untenable. The tuberculosis is generally restricted to the part or organ inoculated, but occasionally the infection spreads and the disease becomes universal. As a rule, human tuberculosis is not so virulent for cattle, but there are numerous exceptions in which the disease develops as rapidly and with as much intensity as from virulent bovine tuberculosis. Fibiger states that besides the animals mentioned above, dogs, cats, sheep, horses, asses and monkeys have been inoculated with human tuberculosis and always with a certain proportion of positive results. The material with which the animals were inoculated included tuberculous sputa, scraps of tuberculous organs, cultures of tubercle bacilli and tissue from lesions in tuberculous meningitis, arthritis, synovitis and lymphadenitis, as well as pulmonary and renal tuberculosis. On an average 45 to 57 per cent. of the inoculations under all these varied circumstances resulted positively. Fibiger refers to his own extensive experiments, reported last year in the *Hospitalstidende* No. 37 and the *Berliner Klin. Wochft.* No. 38, which confirm the results obtained by others, and are included in the above figures. He remarks in conclusion that he can not accept without some reservations Behring's statement that cattle can be rendered immune to human tuberculosis by inoculation with bovine tubercle bacilli and *vice versa*. He also believes that the bacilli of bovine tuberculosis are more dangerous for man than human tubercle bacilli.

27. **Etiology of Hyperacidity.**—Borgbjerg did not find neurasthenia, hysteria nor hypochondria in any one of the 93 cases of hyperacidity which form the basis for this article. On the other hand, constipation was almost constant. In 99 cases of severe constipation in women he found hyperacidity in 33, that is, in 33.3 per cent., while in 68 cases of constipation in men there was hyperacidity in 60, that is, in 88.2 per cent. In 25 per cent. of the male cases there was abuse of tobacco or alcohol, of tobacco alone in 10 and of both combined in 2. In 20 cases of hyperacidity without constipation there was abuse of tobacco or alcohol in 50 per cent., and all were improved by suspension or reduction of the tobacco or alcohol. In one case the hyperacidity could be explained by hasty eating and insufficient mastication (during a trip to America, he qualifies, in parenthesis). In another there was dilatation of the stomach, which subsided under careful dieting. He found "nervous" symptoms in only 6 cases, and not pronounced in any. He concludes with the description of a case in which the hyperacidity and headache were evidently of reflex origin from a small reducible inguinal hernia; both vanished as soon as a truss was worn.

30. **Clinical Picture of Cerebrospinal Meningitis.**—In 1898 an epidemic of 161 cases of cerebrospinal meningitis was observed at Copenhagen between April and July. Sorensen reviews the clinical picture in 60 of these cases, comparing it with the autopsy findings in 19. Lumbar puncture was done in 51, but no fluid could be obtained in 17. In 31 of the others examined under the microscope the meningococcus was found in 27. In the cases in which the onset was severe and the disease fatal in a month or less, meningitis was always found, while in the cases with a slower course there was only hydrocephalus. No less than 4 of the 19 cases that came to autopsy showed tuberculous lesions. Hence the finding of tubercle bacilli in the cerebrospinal fluid does not necessarily exclude epidemic meningitis. He describes the particulars of a large number of cases, with 23 temperature curves.

32. **Deprivation of Salt in Treatment of Epilepsy.**—Madsen thinks that the results observed to date indicate that the bromids actually take the place of sodium chlorid in the organism when the latter is deprived of its ordinary supply of salt. He has followed Balint's directions for bread with sodium bromid instead of salt, in a number of cases of epilepsy, and tabulates 7 in detail. Out of the total number only one had any more seizures during the five to seven months following, although previously they had had from 1 to 28 a month. The one patient in whom the seizures recurred had only 2 in the course of five months afterward, to 34 in the preceding nine months.

34. **Lupus Cured with Ethyl Chlorid Refrigeration.**—Nordentoft extols the convenience and inexpensiveness of this method of treating facial lupus with which he had been eminently successful in a case. Dethlefsen first announced the efficacy of this treatment and reported a case in 1900 and one more in 1901, but has not published the remote results. The patient in the case here illustrated was a woman of 64, who had suffered for years from lupus of the nose. The cuts show that she had entirely recovered after 48 seances, at first daily and then once a week.

Archiv f. Allg. Pathologie, Etc. (Virchow's), Berlin.

Last indexed page 65.

36 (CLXXII, 1.) Hermaphroditismus verus. W. Simon (Königsberg). One case.
37 Study of Fat Formation and Disappearance. F. Hagemeister.—Zur Kenntnis des Fattschwundes und der Fettbildung in ihrer Abhängigkeit von Circulationsstörungen.
38 *Zur Kenntniss der Banti'schen Krankheit und Splenomegalie. A. Borissowa.
39 Ueber Meningo-Encephalitis beim Kaninchen (in the rabbit). P. Misch.
40 Ueber die Rachitis der Affen (in monkeys). D. v. Hansemann.

38. **Banti's Disease and Splenomegalia.**—In the case of Banti's disease reported, the endothelium of the venous capillaries of the spleen was much swollen and contained numerous red corpuscles and fragments giving the iron reaction. This has never been observed before, Borissowa states. The bone marrow was apparently normal only that the elements were more crowded than usual, actually suggesting exaggerated activity on the part of the marrow.

Centralblatt f. d. ges. Therapie, Vienna.

41 (XXI, 1-2.) Zur Pathogenese und Therapie der nervösen Dyspepsie. W. Zweig (Vienna).—"Only specific treatment is rest for body and mind."
42 Susceptibility of Organs and Tissues. R. Kraus.—Ueber Empfindlichkeit der Organe und Gewebe für Bakterien und Toxine.
43 Therapeutische Kleinigkeiten (trifles). M. Horovitz.
44 (Nos. 3-4.) Aims of Balneo-Therapy. E. H. Kisch (Marienbad).—Ziele der Balneotherapie.
45 Treatment of Rectal Fistulæ. J. Sternberg (Vienna).—Ueber die Behandlung der Mastdarmfisteln.
46 To Harden Children. B. Baxbaum.—Zur Frage der Abhärtung.

Muenchener Med. Wochenschrift, Munich.

47 (No. 20.) Commendation of Witzel's Ether-Drop-Narcosis. F. Berndt (Stralsund).—Zur Empfehlung der W. Aethertropfnarkose.
48 Appendicitis und Eingeweidewürmer (helminths). W. Oppe (Dresden).
49 Mouth Murmur. G. Fischer.—Das Mundhöhlengeräusch. (Commenced in No. 19.)
50 Estimate of Value of Sanatorium Treatment for Lung Disease. F. Kohler (Holsterhausen).—Die Bewertung der modernen Lungenheilstattenbehandlung im Lichte der Statistik, ihrer Praxis und ihrer Aufgaben. (Commenced in No. 19.)
51 Physiology in Medical Training. J. Rosenthal.—Die Stellung der Phys. in med. Unterricht.
52 (No. 21.) Immediate Delivery the Best Treatment for Eclampsia. E. Bumm (Halle).—Die sofortige Entbindung ist die beste Eklampsiebehandlung.
53 Hysterotomia vaginalis anterior. M. Simon (Nuremberg). Three cases of conservative vaginal Cesarean section.

54 Zur Therapie der Extra-uterin-gravidität. W. Thorn.
55 *Lysol-Vergiftung (intoxication). F. Hammer.
56 *Vegetarian Diet in Gynecology. A. Theilhaber (Munich).—Die Anwendung der sogen. veg. Diät in der Praxis des Frauenarztes.
57 Injuries of Uterus. Osterloh (Dresden).—Verletzungen der Gebärmutter.
58 *Protracted Lactation. Nussbaum.—Ueber lange anhaltende Funktion der Milchdrüsen.
59 *Aseptischer Dilator für die Cervix Uteri mit auswechselbarem Laminariastift in auskochbarer Hülle. B. Müller (Hamburg).
60 Ein einfacher, praktischer Uterus-Dilatator. Krull (Dresden).
61 *Blood Agar for Differentiation of Streptococci. H. Schottmuller.—Die Artunterscheidung der für den Menschen path. Str. durch Blutagar.
62 (No. 22.) *Ueber Nekrose der Gallenblase (of gall bladder). Czerny (Heidelberg).
63 Die chirurgischen Behandlung des akuten und chronischen Choledochus-Verschlusses durch Stein und Tumor. H. Kehr. Address delivered at Washington, D. C., May 13.
64 *Ein mit Talmascher Operation behandelter Fall von Synechia pericardii. P. Clemens (Freiburg).
65 Commendation of Bier's Passive Hyperemia. Habs.—Ueber die Biersche Stauung.
66 Weight-Bearing Stumps Below the Knee. Amberger (Rehn's clinic, Frankfurt).—Zur Kasuistik der tragfähigen Unterschenkelstümpfe.
67 Otiatric Casuistik. Bezold.—4 Operationsfällen auf otiatrischem Gebiet, 2 Neubildungen, einen Gipsabguss im Gehörgan und einem Cholesteatom mit Eitersenkung bis zur Skapula und Klavicula.
68 Acute Necrosis of Mastoid Process and Temporal Bone After Scarlet Fever. G. Heermann (Kiel).—Ueber akute Nekrose des Warzenfortsatzes und Felsenbeins nach Scharlach.
69 Modified O'Dwyer Gag. A. Rahn.—Die modifizierte O'D. Mundsperre.
70 Report of the Hamburg "Milk Exposition," May 2-12.
71 (No. 23.) *Operation for Detachment of Retina. L. Müller (Vienna).—Ein neues Operationsverfahren zur Heilung der Netzhautabhebung.
72 New Staining Reaction, P. Erdmann and H. Winternitz (Halle).—Ueber das Proteinochrom, eine klinisch und bakteriologisch bisher nicht verwertete Farbenreaktion.
73 *New Views of Hay Fever. A. Thost (Hamburg).—Neuere Erfahrungen über das Wesen und die Behandlung des Heufiebers.
74 Thymus Death. Leubuscher (Meiningen).—Fragliche Todesursache im Säuglingsalter. Two cases.
75 Ueber Diabetes insipidus. A. Wolff. Two cases.
76 Ueber cirkumscripte tuberkulöse Meningitis. A. Saenger.
77 Ueber die Ankylostoma-Gefahr in Kohlengruben. J. Iberer.
78 Prostata und Albuminurie. C. Kruger.
79 Die Chloroform-Nasen-Maske. C. Reissig (Hamburg).
80 Geschlechtskrankheiten (venereal diseases) und Prostitution. Jordan (Heidelberg).

55. **Lysol Intoxication.**—After observing a fatal case of lysol intoxication, Hammer experimented with it on laboratory animals and looked up the subject in the literature. He is convinced that in his case some of the 1 per cent. solution of lysol injected into the uterus on account of a febrile condition following delivery with placenta previa, was aspirated into a vein. The lysol was thus carried to the brain and caused symptoms of collapse. These subsided, but a part of the solution must have remained in the vein and caused erosion of the endothelium with local thrombosis later. This thrombosis gradually extended centralward with fatal results. The solution of lysol for intrauterine irrigation in obstetric cases should always be weak and never be used under strong pressure. Especially in case of placenta previa great caution is necessary on account of the aspirating tendency of the gaping veins.

56. **Vegetarian Diet in Gynecology.**—Theilhaber attributes many of the ills that female flesh is heir to, especially in the well-to-do classes, to over-eating. He recommends a varied vegetarian diet, that is, excluding all parts of the dead animal, but allowing milk, eggs, etc., as products of the living animal. His experience includes 300 cases, but only 200 carried out his instructions for six months, at least, as directed. He has found this diet very valuable in various nervous affections, in the troubles of the menopause, in nervous insomnia, pruritus vulvæ and general pruritus, hemorrhoids, etc., and in one case of protracted galactorrhea, and thinks it would be advantageous in pregnancy nephritis or neuroses, but has had little opportunity to test the latter. In case of constipation or flatulence, the gas-producing substances must be excluded, but a careful selection will render the vegetarian diet very useful under these circumstances. Obese patients lost flesh, but others did not, as a rule, and none exhibited any loss of strength. He refers to the endurance of the Japanese, who eat little meat, as also the Trappist monks. He thinks that time will yet show that many obstinate nervous affections may be cured by abstention from meat.

58. **Protracted Lactation.**—In Nussbaum's two patients the galactorrhea continued for a year or two after the child had been weaned, reducing the patient to emaciation. The morbid tendency was cured by a compressing bandage, mild laxatives and small repeated doses of antipyrin. Zeitlin has published in a Russian journal a case in which the mammary glands continued their secretion for five years, although the patient had suffered from a metritis dissecans and amenorrhea in the interim.

59. **Aseptic Dilator for the Cervix.**—Müller uses a laminaria tent enclosed in a rubber cover. The latter is sterilized by boiling. The tent is held in place with a Hodge ring pessary, and a rubber bulb and tube supplies the moisture to the laminaria inside its rubber cover.

61. **Differentiation of Streptococci with Blood Agar.**—The use of blood agar has rendered possible the separation of streptococci into two groups, of which the one found in erysipelas is more malignant. The fact that the growth of the other is checked to such an extent by the blood agar justifies the hope that affections due to this germ, which Schottmuller calls Strept. mitior viridans, may prove to be amenable to serum treatment. He has also succeeded with the blood agar in differentiating a hitherto undescribed variety, the Streptococcus mucosus, which he isolated in 7 cases, all but 2 fatal.

62. **Necrosis of Gall Bladder.**—Czerny reports 2 cases, one terminating fatally. Both belong in the class of masked gallstone affections without characteristic colics. He operated on both, one requiring a second intervention. He found at the autopsy of the one and at the second operation in the other case that he had overlooked a gallstone. He usually operates conservatively on the gall bladder, restricting his intervention to mere cholecystostomy with water-tight drainage and suspension of the gall bladder. The fistula heals in about three weeks, and 85.7 per cent. of all his gallstone patients have been permanently freed from their disturbances by this easy and comparatively harmless intervention. He describes his technic in detail.

64. **Adhesion of Pericardium Treated with the Talma Operation.**—As a last resort, the Talma operation was performed, but without results, except a temporary improvement.

71. **Operative Treatment of Detachment of Retina.**—Müller's experience has shown that the cause of this condition is either an inflammatory exudate in case of choroiditis or a hemorrhage or a transudation due to venous congestion in the choroid, the precursor of acute, circumscribed atrophy of the choroid, and implicated in the tension. There is also a possibility of laceration of a coat of some vessel. The transudation may be due to compression of the vessels in the choroid by a tumor, or it may be the result of some affection of the blood, as in case of Bright's disease. The operation he suggests and has successfully performed on 7 patients, aims to put an end to the tension of the choroid noted in high myopia, and also to the distention and stretching of the normally located retina. It consists in excision of a strip of the sclerotic coat, 8-10 mm. wide by 20 in length, from the outer portion of the posterior segment, leaving the choroid intact and only allowing so much of the subretinal fluid to escape as is required by the reduction in size of the capsule of the eyeball. The rest is readily absorbed. The details of the operation are described at length, with the clinical cases in which it has been performed to date. The results, he thinks, justify him in announcing this method of treating detachment of the retina as causal and effective. Neither the duration of the detachment nor the degree are any obstacles to the complete and permanent reposition of the retina by this method. The restoration of vision depends on the progress of the accompanying anatomic lesions. Detachment of many years' standing offers little prospect of restoration of much vision, and when the detachment occurs at the macula, restoration of function can scarcely be anticipated for the latter. The operation includes temporary resection of the wall of the orbit.

73. **Effective Serum Treatment of Hay Fever.**—Dunbar's announcement that he had succeeded in isolating the substance

which caused hay fever and in producing an antitoxin for it, was duly chronicled in THE JOURNAL of April 4, page 943, ¶47. This communication gives further details, stating that time has only confirmed the correctness of his assumptions as established by a very large number of tests on hay fever subjects who have thronged to him in the hope of relief. Dunbar suffers himself from hay fever, and has been studying it for years. The toxin which causes it in the predisposed, and in them alone, is a soluble starch grain in the heart of the pollen of grains and grasses. He was able to induce a typical attack of hay fever with asthma by subcutaneous injection of this toxin in winter. The serum of animals inoculated with it protects susceptible subjects against infection with the pollen toxin, and there is every reason to suppose that it will protect against actual hay fever. The serum is perfectly harmless, but he does not give it to any one but physicians, and they must apply directly to him at the Institute of Hygiene, Hamburg, Germany. He notes the fact that hay fever occurs almost exclusively among the educated classes, affecting men and women who are under some mental and physical strain and compelled to be out of doors more or less. Among merchants and manufacturers, it usually affects those who are obliged to take long business trips. Physicians are peculiarly its victims; in his statistics fully 10 per cent. were medical men. The women victims are those who travel much or practice vocal or instrumental music or keep up a large household or have passed through numerous pregnancies. His statistics also seem to show that the prevalence of influenza has something to do with the increasing number of hay fever victims. The summer of 1902 was so cold and rainy that the grasses did not ripen until two weeks later than usual, and all the hay fever subjects mentioned the fact that the onset of their annual scourge was delayed two weeks beyond the usual date. Thost advises persons subject to hay fever to treat any concomitant gout or catarrh before hand, so as to enter the hay fever season in their best physical condition. Alcohol and tobacco should be avoided as the date approaches, with all other irritants and the body should be hardened by cold and cool sponges, air baths, etc. A certain protection is afforded by keeping indoors, in cool rooms with the windows tightly closed and the car windows closed when traveling. The eyes may be treated by local measures, cool applications, instillation of cocain, holocain or adrenalin. One ophthalmologist found that he derived relief from instillation of a .2 per cent. solution of silver nitrate, and in a slightly stronger solution this may be applied to the nose with benefit. Rinsing the nose with tepid saline solution, greasing it or plugging the nostrils with cotton, possibly mentholized or formanized cotton are also useful preventive measures. Glaring sunlight should be warded off with blue glasses compressing the nose. Sprays, etc., are more effectual when they are applied to the upper part of the nose at the terminals of the olfactory nerve. Holding the handkerchief to the nose or wearing a gauze veil is a protection when traveling, and small nose filters have also proved useful. Quinin is a good tonic in these cases and the usual measures against asthma will afford relief. In sending hay fever patients away from home, the blossoming time of the gramineæ must be borne in mind and avoided if possible.

Therapie der Gegenwart, Berlin.

Last indexed XL, page 1546.

81 (No. 5.) *Prevention and Treatment of Hydronephrosis. H. Strauss.—Zur Behandlung und Therapie der Nierenwassersucht.

82 *Saliva as a Curative Factor. J. Bergmann (Hanau).—Der Speichel als Heilfaktor.

83 Ueber die therapeutischen Indikationen des Skopolaminum hydrobromicum (zugleich ein Beitrag zur Schneiderlin-Korff'schem Narkose. M. Kochmann.

84 Symptomatic Treatment of Cerebral Affections Reducing Space. H. di Gaspero (Graz).—Ueber die sympt. Behandlung raumbeengender Gehirnerkrankungen.

85 Zur Behandlung der veralteten traumatischen Luxation der Hüfte (of the hip). W. Klink (Berlin).

86 Ueber die totale Exstirpation des septischen puerperalen Uterus. O. Feis (Frankfurt).

87 *Das Yohimbin (Spiegel) als lokales Anestheticum, bes. in der Behandlung der Ohren- und Nasenerkrankungen. Haike (Passow's clinic, Berlin).

88 Latest Efforts in Kidney Surgery. M. Schede (Bonn).—Die neuesten Bestrebungen auf dem Gebiet der Nierenchirurgie. Critical Review.

89 Treatment of Fractures of the Forearm. G. Müller.—Zur Behandlung der Vorderarmbrüche.

81. Prevention and Treatment of Hydronephrosis.—This communication from Senator's clinic calls attention anew to the fact that a diseased kidney eliminates not only less water, but also less salt. This was confirmed by a long series of experiments with salted food on nephritic subjects. The diseased organ eliminated less chlorids, both quantitatively and proportionately than the other kidney. This was especially marked in case of hydronephrosis. The proportion of salt in the urine from the diseased kidney did not vary from the usual amount, but, on the other hand, the proportion of phosphoric and sulphuric acid in the urine was about the same for each kidney, in notable contrast to the proportion of salt. These and similar facts observed have convinced Strauss that dropsy is not only accompanied by a retention of salt, but has also some direct causal relation to it, and that the salt retention is due to the kidney itself. The practical application of these conclusions is that in all cases of nephritis, or at least those with a tendency to edema, the intake of salt should be restricted and its elimination promoted. The dietary should be as free from salt as possible; milk is particularly valuable on this account. If saline infusion is necessary a hypo- rather than an isotonic saline solution should be used, or, better still, substituted by Schücking's sodium saccharate or fructosate solution. (Formula was given in THE JOURNAL, XXXIX, p. 454, ¶83.) The proportion of salt in the edema remains unaltered, and consequently retention of 6 gm. of salt means the retention of a quart of water to hold it in solution. Treatment should aim to promote the elimination of salt by diuretics known to increase it. Among these are the heart tonics which by inducing better conditions in the circulation augment the elimination of salt. Nature strives to accomplish this spontaneously, and the transformation of a chronic parenchymatous nephritis into a secondary contracted kidney depends in large measure on the ability of the heart to become hypertrophied. Caffein takes the lead among the diuretics proper. In the experiences reported the amount of water eliminated was frequently normal, notwithstanding the retention of salt. The edema vanished when by medicinal or other measures polychloruria had been induced in addition to the polyhydruria. The hydruria was often capriciously variable on different days, but the proportion of salt was a constant figure. He concludes by urging the necessity of determining the proportion of salt in the urine as a routine measure, remarking that retention of salt without edema is the incipient stage of hydronephrosis or general dropsy later. He recommends for the purpose Achard and Thomas' bedside approximative test as simple, easy and sufficiently accurate. [This test was described in the *Bull. Soc. Hop. de Paris*, 1902, No. 22. It is a reversal of the ordinary silver solution test. Instead of adding the silver solution to the urine, the latter is added to a given amount of the titrated silver solution (29.075 per 1000, of which 1 c.c. precipitates 1 cg. of chlorids). A graduated Esbach tube is used, in which 5 c.c. of the silver solution are poured and three or four drops of a 1 per 5 solution of potassium chromate or bichromate added. A silver chromate is formed, but as soon as the urine is poured into the tube and shaken up a silver chlorid forms and the chromate is decomposed, the reddish brown tint of the fluid changing to a clear yellow. The tube is graduated with a scale calculated as follows: 3.3 c.c. represents 15 gm. of chlorid per 1000; 5 c.c. represents 10 gm.; 7.1 c.c. represents 7 gm.; 10 c.c. represents 5 gm.; 12.5 c.c. represents 4 gm.; 14 c.c. represents 3.5 gm.; 16.6 c.c. represents 3 gm., and 20 c.c. represents 2.5 gm. The silver solution may be diluted or the urine, rectifying the scale readings to correspond. The urine must be acid, and a little vinegar may be added if necessary. The urine should be poured in up to each mark in turn, stopping and shaking at each one to note if the reaction occurs. It is wise to test with urine taken from the total amount for twenty-four hours, bringing the amount up to one or a round number of liters by adding water, multiplying the readings to correspond as the scale is computed for one liter.—ED.] Strauss concludes with the statement that treat-

ment of patients on these lines has afforded results which unmistakably demonstrate that we are on the right road in basing prophylactic and curative measures in hydronephrosis on the retention of the chlorids. It is possible, he adds, that further study of the chemistry of the urine may build up a firmer foundation for the new physical-chemical tests of kidney functioning. [Widal and Lemierre reported at the meeting of the Paris "Soc. Méd. des Hop.," June 12, that they had been able to induce the formation of edema at will in 2 cases of nephritis, predominantly epithelial, by addition, for six to ten days, of 10 gm. of sodium chlorid to the day's rations. The weight increased as the edema formed, and subsided when the patients were put on a milk diet without salt and the edema vanished. In 4 cases of arteriosclerosis with interstitial nephritis the ingestion of sodium chlorid had no influence on the edema. Analysis of the cases shows that salt induces edema when there is already marked retention of the chlorid, but not when it is being eliminated normally or above. Dufour mentioned that in 2 tabetics under specific treatment with addition of salt the knee-jerk returned in one and this and the Achilles-jerk in another. About 2 or 3 gm. of salt were taken daily for months. The knee-jerk on one side vanished afterward in one case subsequent to a gastric crisis. Other facts in regard to alimentary chloruria in nephritis have been published by various French authors recently, some pointing out the large proportions of salt eliminated in chronic sclerous nephritis, others the gravity of the prognosis in nephritis accompanied by retention of chlorid. Others still suggest that the chloruria may not be exclusively dependent on the kidneys, and that the kidney lesions are not directly responsible for the hypochloruria.—ED.]

82. **Saliva as a Factor in the Cure of Disease.**—Bergmann styles the gargle "therapeutic trifling," inefficient for any real purpose. He thinks, on the other hand, that the saliva reaches every part of the throat and can be made the vehicle for therapeutic applications. To promote the flow of saliva he orders "chewing tablets," and advocates their use in throat affections, in dyspepsia, obesity and edema. He has a special medicated or non-medicated tablet for each. The alkaline saliva is particularly beneficial in acid dyspepsia. In case of obesity or edema the accumulating saliva is expelled and the large amount of fluid that is thus eliminated has a surprisingly favorable action in reducing the obesity or edema.

87. **Yohimbin as a Local Anesthetic.**—Haike proclaims that, combined with suprarenal extract, yohimbin is proving an ideal anesthetic for ear and nose work. The combination has all the advantages of cocain with none of its drawbacks.

Wiener Klin. Rundschau, Vienna.

Last indexed XL, page 1333.

90 (XVII, 11.) *Mistakes in Diagnosing in 4 Cases of Stomach Affections. B. Oppler.—Diagnostische Irrthümer bei 4 Fällen von Magenerkrankungen. (Commenced in No. 10.)

91 (No. 12.) Diagnostic Value of Leucocyte Count. L. Kirchmayr.—Ueber den diagn. Wert der Leukocytenzählung bei Entzündungsprozesses der inneren weiblichen Genitalien. (Commenced in No. 11.)

92 (No. 13.) *Mal Perforans After Injury to Sciatic. M. Sattler.—2 Fälle von Mal perforant du pied nach Durchtrennung des Nervus ischiadicus als Spätfolge dieser Verletzung.

93 *Pathognomonik des Gesichtes (of the face). A. Wiesner. (Commenced in No. 8.)

94 (No. 14.) Atonia uteri post partum. W. Brüll. Three cases. No hemorrhage. Cured by massage, etc.

95 (No. 15.) *Tendon Grafting in the Thigh. O. Vulpius.—Die Sehnenüberpflanzung am Oberschenkel.

96 *Ueber Diagnose und Therapie der Migräne. J. P. Karplus. (Commenced in No. 12).

97 Treatment of Consumptives at Health Resorts. B. Rischawy.—Zur Behandlung Schwindsüchtiger in offenen Kurorten.

98 (No. 16.) Normal Birth After Abdominal-Vaginal Suture of Ruptured Uterus Three Months Before Commencement of Pregnancy. K. Kamann.—Fall von rechtzeitiger Geburt nach abdominal-vaginaler konservativer Vernähung einer violenten kompletten Uterus-Ruptur.

99 Congenital Goiter and Swollen Thyroid Observed in Children Born in Face Presentation. Ibid.—Der angeborene Kropf, etc.

100 (No. 17.) *Blue Light Treatment. G. Kaiser (Vienna).—Methodik und Erfolge der Blaulichtbehandlung. (Commenced in No. 16.)

101 (No. 18.) Early Operation in Appendicitis on Ground of Pathologic-Anatomic Findings. O. Hartmann.—Ueber die Frühoperation, etc. (Commenced in No. 17.)

102 *Phorxal and Its Importance in Functional Neuroses. A. Stichl.—Phorxal und seiner Bedeutung für die Therapie der funkt. Neurosen.

103 (No. 19.) Microscopic Findings in Fatigued Muscles. W. Scheffer (Berlin).—Weiteres über mikroskopisches Erscheinungen am ermüdeten Muskel.

104 Treatment of Congenital Club Foot. Reichard (Magdeburg).—Zur Behandlung des angeb. Klumpfusses.

105 *Zur Kenntniss der Purpura hemorrhagica. A. Pick (Vienna). (Commenced in No. 18.)

106 (Nos. 20-22.) Cicatricial Stenosis of Larynx. O. Kahler.—Klinische Beiträge zur Behandlung der Narbenstenosen des Larynx.

108 Hemorrhage from Larynx. F. Rode.—Zur Kasuistik der traumatischen Larynxblutungen.

109 Zur klinischen Bedeutung der Halsrippen (cervical ribs). A. Weissenstein.

110 Lighting Strokes and Hemorrhage from Eyes. A. Topolanski.—Blitzschläge und Augenblutungen.

90. **Mistakes in Diagnosing Stomach Affections.**—In one of the 4 cases described the clinical picture of pyloric stenosis was presented, but the obstruction was found to be at the cardia instead. The tumor could not be palpated, as it was fastened down under the liver. The stomach tube could be introduced for 70 cm., and the same amount of fluid poured in could be siphoned out again. The vomiting recurred in the afternoon, and there were no disturbances in swallowing, but esophagoscopy would have disclosed the lesion if anything had called attention to this location of the tumor. In another case the apparent stenosis of the pylorus was caused by the fixation of this part of the stomach in the gall-bladder region owing to unsuspected gallstone inflammation. Another case was diagnosed as a benign stenosis of the pylorus, which had caused symptoms for three and one-half years, but the operation finally disclosed a round-celled sarcoma. There had been no signs of malignant growth; the general health had not suffered to any extent and the patient consented to an operation merely because she was tired of the occasionally necessary lavage of the stomach. Since the tumor was removed she has gained more than forty pounds.

92. **Mal Perforans as Late Result of Traumatic Injury of Sciatic.**—Sattler's two cases were men 56 and 28 years of age. The sciatic nerve had been completely severed, entailing paralysis of the limb. The latter gradually subsided with nearly complete restoration of motor function in the second case within two months and in six years in the first. Most of the sensory disturbances also gradually retrogressed.

93. **Pathognomonics of the Face.**—Wiesner reviews the various signs afforded by the appearance of the face in relation to various affections, allowing the latter to be differentiated by the specific changes in the facial expression, eyes, skeleton, etc. In regard to the risus sardonicus he states that it is liable to be induced by helminths and catarrhal conditions in the intestines, and also by irritation of the phrenic nerve from any affection of the organs it innervates. Some severe febrile affections, such as icterus gravis, yellow fever and pulmonary consumption, are distinguished by a blissful, smiling expression during great prostration. He describes the muscular mechanism for the changes noted in the face in tetanus and other affections.

95. **Tendon Grafting in the Thigh.**—Vulpius does not advocate tendon grafting except in case of flexion preventing the use of the limb. He disapproves of artificial tendons unless there are absolutely no natural tendon fibers to work with. If the silk is expelled later as a foreign body the result of the operation is lost. There are about 30 cases on record of grafting of the thigh tendons, to which Vulpius adds his experience of 20 cases, about 8 per cent. of his total of tendon-grafting operations. He illustrates several severe cases. In some all of the flexors and in others only part of them were transplanted in a single intervention which restored walking capacity. The more extensive the paresis the more complex the operations required, as in a case he illustrates in which the child had never used his flexed lower limbs at all. He had to lengthen the Achilles tendon by a plastic operation and graft a tendon in the leg. The left knee fixed in marked permanent flexion was treated by arthrodesis, the biceps transplanted forward, to prevent recurrence. The contracture in the hip joint was treated by myotomy, the bony fixed abduction remedied by subtrochanterian osteotomy. The right knee in flexed contracture was left movable. This was accomplished by transplanting the biceps, semitendinosus, semimembranosus

and sartorius forward and suturing them to the median and lateral margin of the patella. These interventions required three months, and now, fifteen months later, the boy can stand erect and walk with a cane out of doors and in the house without. He can flex his knee to 45 degrees, extension is perfect and with nearly normal strength. The plaster cast after tendon grafting is left for five weeks, during which the patient remains in bed. The after-treatment with massage, gymnastics, electrotherapy, etc., is not merely for the purpose of strengthening the muscles, but also to educate the corresponding nerve centers to their hitherto missing functions. He makes three lengthwise incisions, the first exposes the patella, its ligament and the quadriceps tendon. The second incision, back of the median condyle, opens up widely the sartorius, and its tendon is isolated and detached. The third incision is made to expose the tendon and belly of the biceps. The terminal tendon is detached and the belly of the muscle mobilized. From the lower end of the first incision a passage is made with a blunt instrument, beneath the fasciæ, through which the tendons are brought forward. As soon as the flexion is corrected the tendons are sutured side by side to the upper edge of the patella and from there downward near the median line as far as the patellary ligament, under moderate tension. The tendons must be fastened so as to act as nearly in a straight line as possible. The incisions are then completely closed; he never tampons.

96. **Migraine.**—Karplus thinks it important to distinguish between the genuine, inherited migraine and the merely symptomatic. For the former speak the appearance at an early age, the constancy of the recurrences and their similarity, and the family history. Genuine migraine is more frequent in women than in men, while paralysis and tabes are more frequent in the latter. In the treatment of genuine migraine removal of any pronounced source of peripheral irritation may have a favorable effect, as also all measures that tend to improve the general health, with avoidance of occasional causes and prophylactic doses of some sedative. It is possible that some drug to act on the vessels might be useful, but it would be dangerous to experiment during an attack. A prophylactic course of small doses of nitroglycerin or theobromin is theoretically justifiable during the intervals. Frequent and severe attacks of migraine probably contribute to deterioration of the walls of the cerebral blood vessels in time. A migraine subject is a chronically diseased patient and needs a certain amount of psychic treatment and tactful sympathy, too often neglected by the physician and rich in its rewards to charlatans.

100. **Blue Light Treatment.**—Kaiser gives illustrations of the apparatus for the production of blue light and of some of the patients whom he has treated by this means. He thinks that his experience with ordinary and erythematous lupus has established that the metabolism is powerfully stimulated by reflex action from the blue rays. The influence of these visible chemical rays is directly proportional to the distance and intensity of the light source. They penetrate blood-filled tissues readily and favor absorption, relieve pain and, when concentrated, induce actual anesthesia.

102. **Phorxal, a New Blood Food.**—Stichl has charge of the Mariagrün sanatorium near Gratz, and has been much pleased with the results attained with this new preparation of blood. He has administered it in 50 cases and found that it has a marked action on the blood, rapidly increasing the proportion of hemoglobin and improving the appetite and assimilation. The patients gained from 2 to 6 pounds a week in many instances after this tasteless powder was added to their food. There were no by-effects from its use, and he concludes by recommending it as a very inexpensive and efficient means of improving the composition of the blood in severe anemia and raising the vital energies of the nervous system in nervous dyspepsia, neurasthenia, hysteria, etc. He shows that in composition and mode of absorption it differs from other preparations of its kind.

105. **Purpura Hemorrhagica.**—In 3 of the 5 cases described the purpura developed independently, and in 2 others in connection with malaria; in one the hemorrhages seemed to appear vicariously in place of the intermittent febrile attacks. All were treated with lemons, six to ten a day, in the 2 last cases associated with Fowler's solution or aspirin. The lemon juice seemed to be promptly effective, although 2 of the idiopathic cases were extremely severe. One developed with a febrile bronchial catarrh and was followed by suppuration of a gland in each axilla. All are described in detail. No injurious by-effects were noted from the lemon treatment, although in large doses it had an evident laxative action. He mentions in conclusion that a popular remedy against malaria on the Roman Campagna is to stew lemons, sliced with the skin, and take the filtrate by the tablespoonful. He has repeatedly found this decoction beneficial in malarial dyspepsia.

Zeitschrift f. Heilkunde (Chiari's), Prague.

Last indexed XL, page 184.

111 (XXIII, Nos. 10-12.) Zur Kenntniss tertiärer Läsionen bei Tumor cerebri. A. Fuchs (Vienna).
112 Ueber Hydranenkephalie (Cruveilhier). H. Kluge (Innsbruck). Eight cuts.
113 *Die Pathologie der Bewegungsstörungen (motor disturbances) bei der Pseudobulbarparalyse. F. Hartmann (Gratz). Seven cuts.
114 *Ueber Ochronose. H. Albrecht.
115 Ibid. E. Zdarek.
116 *Affections Due to Pneumonia Bacillus. Milan Sachs.—Zur Kenntniss der durch dem Pneumoniebacillus (Friedländer) verursachten Erkrankungen.
117 Relations Between Toxin and Antitoxin. R. Kretz (Vienna). Beziehungen zwischen Toxin und Antitoxin.
118 Zur Kenntniss des Lungencarcinoms. P. Dömeny (Vienna).—Ten cases; five cuts.
119 *Die Klinik der sogen. Tumoren des Nervus acusticus. F. Hartmann.
120 Wesen der europäischen Chylurie. K. Franz and K. Stejskal.

113. **Pseudo-Bulbar Paralysis.**—This elaborate article by Hartmann is accompanied by 17 photogravures and a bibliography of 104 references. It is based on the study of 8 cases personally observed and analyzes the motor disturbances of this condition from every point of view with a long array of summarized conclusions.

114. **Ochronosis.**—Albrecht states that he knows of only 6 cases on record of this abnormal dark staining of the tissues, especially of the cartilages, first described by Virchow. He has recently observed a case in a man of 41, a consumptive, with melanuria and pigmentation of the ear. At the autopsy blackish gray or black spots were found throughout the vascular system, accompanying evidences of atheroma. The darkest spots were on the cartilages near the bones and in the joints, but the latter all appeared otherwise sound. Chemical tests showed that the pigmentation was not due to melanin nor to hematin or its derivatives.

116. **Virulent Affections due to Pneumonia Bacillus.**—The author of this article is Dr. Milan Sachs, whose tragic death from laboratory plague was recently reported. He described here a case of rapidly fatal infection with Friedländer's bacillus by way of the urethra, the prostate first invaded. An abscess formed which perforated into a vein, with resulting general infection, endocarditis, meningitis and multiple abscesses in the kidneys. The bacilli were found in the blood in enormous numbers.

119. **Tumors of the Auditory Nerve.**—Hartmann reviews 26 cases on record and 3 personally observed. The most pronounced type of the lesion is in cases with complete nerve deafness accompanied by all kinds of mild functional disturbances on the part of the organs occupying the posterior cranial fossa. The lesion first manifests itself by slowly encroaching nerve deafness, associated with slight dizziness, attacks of headache or paresthesia and pains in the trigeminus domain and possibly slight hemiataxia. Slowly progressive nervous deafness with one or more of these symptoms should suggest a tumor in the acustico-cerebellar space. Later choked disc becomes apparent, with motor and sensory disturbances in the extremities and finally disturbances in the functions of the other cranial nerves, predominating on the same side. A course of two to eight years may be anticipated, but early operation is justified by the precision with which the lesion can be located and the exceptional readiness with which the tumor shells out.

Zeitschrift f. klin. Medicin, Berlin.
Last indexed XL, page 1765.

121 (XLIX, 1-4, Runeberg Festschrift.) *Effect of Morphin on Secretion of Gastric Juice. H. Holsti.—Wirkung des Morphiums auf die Absonderung des Magensaftes.
122 Changes in Spinal Cord in Chronic Alcoholism. E. A. Homen. —Die Veränderungen im Rückenmark bei chron. Alkoholismus.
123 *Displacement of Kidney from Clin.-gynec. Standpoint. O. Engstrom.—Ueber Dystopie der Niere, etc.
124 Dilatation of Esophagus. R. Sievers.—Zur idiopathischen Oesophagus-Erweiterung. One case.
125 *Ueber das sogen. einfache Entero-Cystom und seine Bedeutung als Ursache von Darmverschluss. A. Krogius.
126 *Ueber die Häufigkeit und klin. Bedeutung der Pupillen-Differenz, nebst einigen Bemerkungen über den sogen. "Springende Mydriasis." A. O. Schauman.
127 *Transmission of Scarlet Fever by Milk. K. Ekholm.—Zur Scharlachübertragung, etc.
128 Importance of Deformities in Spine and Thorax for Diagnosis of Syringomyelia. J. Hagelstam.—Ueber die Bedeutung der Difformitäten, etc.
129 *Cerebral Affections After Carbonic Oxid Poisoning.—C. Sibelius.—Zur Kenntniss der Gehirnerkrankungen nach Kohlenoxydvergiftung.
130 *Late Disturbances After Tracheotomy. W. Pipping.—Spätstörung nach der Tracheotomie.
131 Scirrhus mammæ und Adenocarcinoma nasi bei derselben Kranken. W. Zilliacus.
132 *Round Ulcer in Finland. W. Backman.—Ueber die Verbreitung der runden Magengeschwurs in Finland sowie Einiges über seine Aetiologie.
133 Fall von Diabetes insipidus. T. W. Tallqvist.
134 *Albumin Metabolism in Anemia. E. Rosenqvist.—Ueber den Eiweissstoffwechsel bei der perniciösen Anämie, mit specieller Berücksichtigkeit der Botriocephalus-Anämie.
135 *Zur Frage der Pathogeneität des Balantidium coli. E. Ehrnrooth.
136 Paralysie douloureuse (Chassaignac). E. Lövegren.
137 *Rigid Spine. V. O. Siven.—Zur Kenntniss der sogen. chron. ankylosirenden Entzündung der Wirbelsäule.
138 *Casein Enemata and Phosphorus Metabolism. R. Ehrstrom. —Nährwerth des Caseinklystiere nebst Bemerkungen über den Phosphorstoffwechsel.
139 Ueber den Werth der Hämotokrit-Untersuchungen. E. Aspelin.
140 Rupture of Aorta in Apparently Healthy Boy of 13 After Long Skating. E. Wasastjerna.—Aortaruptur nach Schlittschuhlaufen, etc.

121. **Effect of Morphin on Gastric Secretion.**—The twenty articles in this souvenir number of the *Zeitschrift* are all by present or former pupils of Prof. J. W. Runeberg of Helsingfors, Finland. Holsti has studied the effect of morphin on the gastric secretion in 10 subjects. His general conclusion seems to be that the injurious influence of the drug is due more to its disturbing action on the motor function than to any influence on the secretion of gastric juice.

123. **Ectopic Kidney from Gynecologic Standpoint.**—In one of the 3 cases described one kidney was low in the small pelvis. In the second the left kidney was at the umbilicus and in the third a horse-shoe kidney was located very low, but the patient had borne four children. A number of cases of a congenital pelvic kidney obstructing delivery are on record. Even if the birth proceeds normally, the results may be disastrous from compression of the organ by the gravid uterus. Nephrectomy solely on account of interference with childbirth is not justifiable, and there are few instances on record where even restoration to normal position was attempted.

125. **Enterocystoma as Cause of Ileus.**—Krogius has observed a case of this kind and found records of 4 more in the literature. The age was 11 days to 62 years; all the patients were operated on, but all succumbed except one, 15 years old. His own patient was a two-months' infant.

126. **Pupil Aberrations.**—Schauman has noted a difference in the pupils in 723 subjects. The number includes 401 subjects, or 55.5 per cent., with no organic lesions but some neurosis, including 11 with exophthalmic goiter, 4 epileptics and 3 with chorea. In the remaining 322, or 44.5 per cent., there were organic lesions, including tuberculosis in 6.8 per cent. and some vascular affection in 5.5 per cent. When it is not due to an organic lesion it is therefore the expression of an asthenic diathesis or a sign of hereditary degeneracy. Jumping mydriasis is not so rare as generally supposed, he finds. He observed it in 11 cases, all with neuropathic manifestations from childhood. Hysteria was manifest in 3 or 4 and the others were not above suspicion. He does not regard it as a precursor of serious trouble.

127. **Transmission of Scarlet Fever in Milk.**—The milkmaid, a girl of 16, had been treated for a phlegmonous angina, and shortly afterward cases of scarlet fever developed in six families who were supplied with milk from this farm, and only two families with children on this milk route were spared. Two of the adults also suffered from a febrile tonsillitis at the same time. The facts observed suggest a genetic connection with the milk supply.

129. **Carbonic Oxid Poisoning.**—A young man was found unconscious five minutes after he had descended into a cistern in which a coke fire was burning. He recovered consciousness next day, but was totally blind and died in a month. The microscope showed lesions resembling those of a toxic, especially an alcoholic encephalitis. Sibelius remarks that the phenomena observed indicate that the toxic action of carbonic oxid is not essentially the driving out of the oxygen, but rather a primary toxic influence on the central nervous system.

130. **Ultimate Outcome of Tracheotomy.**—Pipping states that only 2 have become tuberculous out of his 67 patients on whom tracheotomy was done. His experience includes 82 cases since 1868. Seven of the patients have died. In 54 followed to date, 31 are free from disturbances of any kind, 20 have some trivial disturbances and one still has a fistula, one a chronic thickening in the right lung and a third is tuberculous, her father a consumptive.

132. **Round Ulcer in Finland.**—Round gastric ulcer is common all over the country, so that every physician averages about one to three cases a year. A collective inquiry among 79 physicians resulted in securing data in regard to 762 cases, including 5 children under 10, 369 women and 361 men. It seems to affect all classes indiscriminately. Traces of ulcer were noted in 2.29 per cent. of 3,577 cadavers, and ulcer was treated in 1.74 per cent. of 11,850 patients at the clinic.

134. **Albumin Metabolism in Pernicious Anemia.**—Rosenqvist's article fills 128 pages and contains detailed bibliographic notes. It is based on a study of the metabolism in 20 cases of anemia due to the bothriocephalus and to a number of cryptogenetic cases of pernicious anemia. In both cases there is a destruction of albumin, manifestly of a toxic nature, and in both there are evidences of phenomena of immunization in time. The destruction of albumin is more constant in the anemia due to the bothriocephalus, and it persists for a time after expulsion of the latter. In both forms of anemia there is also at times an exaggerated elimination of the endogenic purin bodies, a probable indication of exaggerated destruction of nucleated tissues.

135. **Pathogenic Action of Balantidium Coli.**—Ehrnrooth has not found evidences of degenerative or inflammatory processes elsewhere than in the gastrointestinal tract and there they were unmistakably of mechanical origin. Neither the blood nor the organs suggest intoxication from the presence of the balantidium coli. He describes a case in detail, a woman of 52, who for twenty years had suffered from vomiting and abdominal pains.

137. **Rigid Spine.**—From the autopsy of a case and reports of five others Siven has become convinced that this disease is an inflammation of the joints entailing finally complete ossification of the smaller spinal articulations, a chronic ankylopoietic arthritis. The process differs from that of general arthritis deformans.

138. **Casein Enemata.**—Proton is a patented preparation of milk casein. Mixed with milk it forms an excellent material for nutrient enemata, readily absorbed and containing a large proportion of albumin and phosphorus.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

TWENTY-SECOND ANNUAL MEETING OF THE HAMOT HOSPITAL ASSOCIATION, with Reports of Managers and Officers, 1902. Paper. Pp. 71. Erie, Pa.: Herald Printing and Publishing Company. 1903.

A MANUAL OF SURGICAL TREATMENT. By W. Watson Cheyne, C.B., M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London, and F. F. Burghard, M.D., M.S. (London), F.R.C.S., Teacher of Practical Surgery in King's College, London. In Seven Volumes. Volume VII. The Treatment of the Surgical Affections of the Rectum, the Liver, Pancreas and Spleen, the Genito-urinary Organs, the Breast and the Thorax. Cloth. Pp. 559. Price, $5.75 net. Philadelphia and New York: Lea Brothers & Co. 1903.

SURGICAL DISEASES OF THE ABDOMEN, with Special Reference to Diagnosis. By Richard Douglas, M.D., Formerly Professor of Gynecology and Abdominal Surgery, Medical Department, Vanderbilt University. Illustrated by 20 Full-page Plates. Cloth. Pp. 883. Philadelphia: P. Blakiston's Son & Co. 1903.

INDEX-CATALOGUE OF MEDICAL AND VETERINARY ZOOLOGY. Part 3. (Authors C to Czygan.) By Ch. Wardell Stiles, Ph.D., Consulting Zoologist of Bureau of Animal Industry, and Albert Hassall, M.R.C.V.S., Acting Assistant Zoologist of Bureau of Animal Industry. Paper. Pp. 324. Washington: Government Printing Office. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. A., under orders from the Adjutant-General's Office, Washington, D. C., for the week ending June 20, 1903:

Bosley, John R., contract surgeon, will proceed from Washington, D. C., to Governor's Island, N. Y., and report to the commanding general, Department of the East, for assignment to duty.

Field, Peter C., first lieut. and asst.-surgeon, is granted an extension of fifteen days' leave.

Shortlidge, Edmund D., first lieut. and asst.-surgeon, having completed the duty for which he was ordered to Washington, D. C., June 3, will rejoin his proper station at the U. S. General Hospital, Presidio.

Straub, Paul F., captain and asst.-surgeon, on the expiration of his present leave is directed to proceed to Camp Monterey, Cal., for duty.

Wilson, Roy A., contract surgeon, is granted leave of absence for two months.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending June 27:

Medical Inspector H. E. Ames, commissioned medical inspector from Jan. 20, 1903.

Surgeon C. F. Stokes, detached from the Navy Yard, League Island, and ordered to the Bureau of Medicine and Surgery, Navy Department.

Surgeons C. D. Brownell, S. G. Evans, C. E. Riggs, M. K. Johnson, W. B. Grove, E. O. Huntington, commissioned surgeons from March 3, 1903.

P. A. Surgeon H. E. Odell, commissioned P. A. Surgeon from Nov. 8, 1902.

Asst.-Surgeon J. J. Snyder, detached from the Naval Hospital, Philadelphia, and granted sick leave.

Asst.-Surgeon W. W. Verner, ordered to the Naval Hospital, Philadelphia.

Surgeons W. M. Wheeler, L. Morris, F. T. Pleadwell, C. P. Kindleberger and F. C. Cook, commissioned surgeons from March 3, 1903.

Surgeon G. Pickrell, detached from the *Iowa* and ordered to wait orders.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended June 25, 1903:

Surgeon J. M. Gassaway, granted leave of absence for two days from June 7.

Surgeon Eugene Wasdin, granted leave of absence for three days from June 20.

Surgeon S. D. Brooks, granted leave of absence for one day, June 22.

Surgeon J. H. White, granted leave of absence for one month from July 2.

Surgeon P. M. Carrington, granted six days' leave of absence under Paragraph 189 of the regulations from June 20, 1903; granted extension of leave of absence for seven days.

P. A. Surgeon G. B. Young, granted leave of absence for two months from July 7.

P. A. Surgeon E. K. Sprague, leave of absence for seven days from June 4, 1903, granted under Paragraph 191 of the regulations, amended so as to be for four days only. Relieved from duty at Fort Stanton, N. M., and directed to proceed to Calcutta, India, for duty in the office of the U. S. Consul-General.

P. A. Surgeon S. B. Grubbs, granted extension of leave of absence for seven days from June 23.

Asst.-Surgeon M. K. Gwyn, to report to Asst.-Surgeon V. G. Heiser, recorder of board of examiners, Manila, P. I., on August 8, 1903, for examination to determine his fitness for promotion to the grade of passed asst.-surgeon.

Asst.-Surgeon W. C. Hobdy, to report to P. A. Surgeon L. E. Cofer, recorder of board of examiners, Honolulu, H. I., on August 15, 1903, for examination to determine his fitness for promotion to the grade of passed asst.-surgeon.

Asst.-Surgeon B. H. Earle, granted leave of absence for seven days from June 25.

A. A. Surgeon Bready, leave of absence for three days granted by Bureau letter of June 6 revoked.

A. A. Surgeon B. Y. Harris, granted leave of absence for thirty days from July 22.

A. A. Surgeon C. B. Sweetin, granted leave of absence, on account of sickness, for thirty days from June 10.

Pharmacist G. W. Iltis, to report to P. A. Surgeon W. G. Stimpson, chairman of board of examiners, San Francisco, on June 29, 1903, for the examination to determine his fitness for promotion to the grade of pharmacist of the second class.

BOARDS CONVENED.

Board convened at Washington, D. C., June 25, 1903, for the preparation of sketch plans and memoranda relative to a hospital building at Ellis Island, N. Y. Detail for the board: Assistant Surgeon General L. L. Williams, chairman; Assistant Surgeon General W. J. Pettus; Surgeon G. W. Stoner; P. A. Surgeon J. C. Perry, recorder.

Board convened at San Francisco, June 29, 1903, for the examination of Pharmacist G. W. Iltis, to determine his fitness for promotion to the grade of pharmacist of the second class. Detail for the board: P. A. Surgeon W. G. Stimpson, chairman; Asst.-Surgeon C. W. Vogel, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended June 27, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, June 13-20, 3 cases.
California: San Francisco, June 7-14, 1 case.
Colorado: Denver, May 23-June 6, 24 cases.
Georgia: Atlanta, June 3-17, 3 cases.
Illinois: Belleville, June 13-20, 3 cases; Chicago, June 6-20, 6 cases, 1 death; Danville, June 6-13, 1 case.
Indiana: Indianapolis, June 6-20, 3 cases; Kokomo, June 13-20, 1 case.
Iowa: Des Moines, June 13-20, 1 case.
Louisiana: New Orleans, June 13-20, 2 cases.
Maine: Fort Kent and vicinity, June 18, 9 cases.
Maryland: Cumberland, May 1-31, 24 cases, 4 deaths.
Massachusetts: Fall River, June 6-20, 7 cases.
Michigan: Detroit, June 15-22, 7 cases; Flint, June 13-20, 1 case; Grand Rapids, June 13-20, 2 cases; Port Huron, June 13-20, 10 cases.
Minnesota: Winona, June 13-20, 1 case.
Missouri: St. Louis, June 7-21, 18 cases.
New Hampshire: Manchester, June 13-20, 2 cases; Nashua, June 13-20, 1 case.
New York: Elmira, June 13-20, 3 cases.
Ohio: Cincinnati, June 12-19, 7 cases; Cleveland, June 6-13, 1 case; Dayton, June 13-20, 2 cases; Hamilton, June 13-20, 3 cases; Toledo, May 30-June 13, 8 cases, 1 death; Warren, June 13-20, 1 case.
Pennsylvania: Carbondale, June 7-21, 4 cases; McKeesport, June 6-20, 1 case; Pittsburg, June 6-20, 40 cases, 4 deaths, 1 case imported; Philadelphia, June 13-20, 35 cases, 4 deaths.
Tennessee: Memphis, June 13-20, 2 cases; Nashville, June 13-20, 1 case.
Utah: Salt Lake City, June 6-20, 18 cases.
Washington: Tacoma, June 15-22, 1 case; Whatcom, Jan. 1-June 1, 14 cases, 2 deaths.
Wisconsin: Milwaukee, June 13-20, 10 cases.

SMALLPOX—FOREIGN.

Argentina: Buenos Ayres, March 1-31, 8 deaths.
Austria: Prague, May 30-June 6, 4 cases.
Belgium: Antwerp, May 30-June 6, 3 cases, 1 death; Ghent, May 16-June 6, 4 deaths; Liege, May 23-30, 1 case, 1 death.
Brazil: Bahia, May 23-30, 2 cases; Rio de Janeiro, May 10-27, 7 deaths.
British Guiana: Domerara, Feb. 10-May 16, 344 cases, 2 deaths.
Canada: Hamilton, June 6-13, 1 case; Ontario, April 1-30, 122 cases, 2 deaths; Vancouver, May 1-30, 1 case.
Canary Islands: Las Palmas, May 18-June 6, 37 cases.
Colombia: Bocas del Toro, June 2-9, 4 deaths.
Germany: Strassburg, April 1-30, 13 cases.
Great Britain: Birmingham, May 30-June 13, 9 cases; Bristol, May 30-June 6, 1 case; Dublin, May 30-June 6, 15 cases, 3 deaths; Dundee, May 30-June 6, 1 case; Leeds, May 30-June 6, 40 cases; Liverpool, May 30-June 13, 81 cases, 5 deaths; London, May 30-June 6, 24 cases; Manchester, May 23-June 6, 20 cases, 4 deaths; Nottingham, May 23-30, 2 cases; Newcastle-on-Tyne, May 30-June 6, 2 cases; Sunderland, May 30-June 6, 2 cases.
India: Bombay, May 19-26, 45 cases.
Japan: Kobe, May 9-16, 2 cases; Yokohama, May 16-23, 1 case.
Mexico: City of Mexico, May 31-June 7, 24 cases, 14 deaths.
Russia: Moscow, May 23-30, 8 cases, 1 death; Warsaw, May 16-23, 1 death.
Spain: Cadiz, May 1-31, 1 case.
Straits Settlements: Singapore, April 11-18, 4 cases.
Turkey: Smyrna, April 19-26, 1 death.
Uruguay: Montevideo, March 1-April 5, 22 cases.

YELLOW FEVER.

Brazil: Rio de Janeiro, May 10-24, 12 deaths.
Colombia: Panama, June 8-15, 3 cases, 1 death.
Costa Rico: Limon, June 4-11, 4 deaths.
Mexico: Coatzacoalcos, May 30-June 6, 1 case; Tampico, June 6-13, 11 cases, 8 deaths; Vera Cruz, June 6-20, 57 cases, 17 deaths.

CHOLERA.

India: Bombay, May 19-26, 1 death; Calcutta, May 16-23, 71 deaths.
Straits Settlements: Singapore, April 11-18, May 8-16, 30 deaths.

PLAGUE.

Australia: Brisbane, April 11-May 9, 5 cases.
Brazil: Rio de Janeiro, May 10-24, 2 deaths.
India: Bombay, May 19-26, 255 deaths; Calcutta, May 16-23, 47 deaths; Karachi, May 17-24, 136 cases, 127 deaths; Mauritius, May 14-21, 2 cases.